Univerzita Karlova

Filozofická fakulta

Katedra sociologie
Sociologie

Disertační práce

Korupce v postkomunistických evropských zemích

Explaining corruption in post-communist European countries

vedoucí práce
PhDr. Jiří Vinopal, Ph.D.

2017 *Kristýna Chábová*

Statement of originality of the thesis:

I hereby declare that this dissertation is the result of my own work and that I wrote it independently, using only duly listed and properly cited sources and references; and that it has not been submitted in connection with any other university course or in fulfilment of the requirements of the same degree or of any other.

In Prague, 23th of January 2017

Kristýna Chábová

Acknowledgements

I would not have been able to finish this dissertation without the support of many people. First, I wish to thank my supervisor, PhDr. Jiří Vinopal, Ph.D., for reading the various versions of this dissertation, for his extremely helpful comments, which always improved the work significantly and for his support throughout my whole PhD studies. Great thanks also to my family and to Vojta for their patience, encouragement, support and endless efforts to help me during this long journey.

I would like to thank also the professors and colleagues in the Department of Sociology at the FFUK as well as my colleagues in the Institute of Sociology of the Czech Academy of Sciences for their support during my studies. Moreover, I would like to thank the foundation „Nadání Josefa, Marie a Zdeňky Hlávkových“ for their financial support and the FFUK for the grant, which enabled me to analyse more deeply the relations between corruption and income inequality. Also, I would like to thank Hertie School of Governance, which hosted me as a visiting PhD student, and namely Professor Alina Mungiu-Pippidi and her team for their advice and inspiration. Finally I would like to thanks participants and lecturers of the Transparency International School on Integrity for the discussions, participants of the ESS and IPSA conferences and the reviewers of the journals and book where I published parts of my dissertation for their comments on different parts of the dissertation, which improved the overall work enormously.

ABSTRAKT

Korupce je vnímána jako jedna z nejvážnějších hrozeb pro společnost, stejně jako pro ekonomiku státu. Z těchto důvodů se mnozí sociologové snažili identifikovat a popsat hlavní příčiny korupčního chování. Tento úkol je komplikován skutečností, že korupce je skrývaná činnost, která je velmi obtížně měřitelná, a zjišťování jejích skutečných dopadů, stejně jako jejích příčin, je velmi složité. Cílem této práce je analyzovat a zkoumat možné příčiny míry korupce na evropské úrovni se zvláštním zaměřením na rozdíly mezi postkomunistickými evropskými zeměmi a ostatními evropskými zeměmi. Nejprve tato disertační práce představuje teorie vysvětlující korupci na globální úrovni a různé definice korupce. Jsou diskutovány konkrétní teorie vysvětlující vztahy mezi korupcí a různými proměnnými, jako HDP na obyvatele, nerovnost příjmů, generalizovaná důvěra mezi lidmi, hodnoty a podíl protestantů v populaci. Zvláštní důraz je kladen na možné rozdílné efekty v případě postkomunistických evropských zemí. V metodologické části jsou hodnoceny různé ukazatele měřící korupci; jako nejlepší indikátor byl zvolen Control of Corruption od Světové banky. Platnost teorií prezentovaných v první části práce je pak testována na 40 evropských zemích s využitím dat od roku 1996 do roku 2014 a s pomocí několika statistických metod jako je OLS regrese nebo víceúrovňové modely. Země jsou rozděleny do dvou skupin: na země s komunistickou minulostí a bez ní a jsou testovány rozdíly mezi těmito dvěma skupinami. Analýza ukazuje zajímavé výsledky, zejména pokud jde o příjmovou nerovnost, HDP na obyvatele a hodnoty. Tento mikro-makro model ukazuje, že existují velké rozdíly mezi jednotlivými zeměmi s komunistickým dědictvím a zeměmi s delší historií demokracie a právního státu.

Klíčová slova

Korupce, Postkomunistické státy, Kvantitativní analýza

ABSTRACT

Corruption is perceived as one of the most serious threats to the society and to the economy of the country as well. For these reasons, many social scientists have tried to discover and describe the root causes of corruption. This task is complicated by the fact that corruption is a clandestine activity, which makes it very difficult to measure and to detect its true effects, as well as its underlying causes. The aim of this dissertation is to analyse and explore possible causes for the level of corruption on the European level with a special focus on the differences between post-communist European countries and the rest of countries in Europe. First, this dissertation presents theories explaining corruption on a global level as well as definitions of corruption. Theories explaining the influences between corruption on a global level and various variables, namely GDP per capita, income inequality, generalized trust, values, and the share of Protestants in the population, are discussed and a special focus is made on the possible different effect in the case of post-communist European countries. Next, in methodological part, indicators measuring corruption are assessed and the best indicator is selected – the Control of Corruption by the World Bank. The validity of the theories presented in the first part of dissertation are then tested on 40 European countries with the use of data from 1996 until 2014 and by using several statistical methods as OLS regression or multilevel models. Countries are also divided into countries with and without a history of communist rule and the differences between them are tested. The analysis shows unexpected results, especially concerning income inequality, GPD per capita and values. This micro-macro model shows that there are huge differences between countries with a communist legacy and countries with a longer history of democracy and rule of law.

Keywords

Corruption, post-communist countries, quantitative analysis

Contents

Tables

Figures

1. INTRODUCTION

Corruption is perceived as one of the most serious threats to society, democracy, and to good governance. Corruption decreases the quality of the public sector in many areas and can even trigger civic unrest (Brown, Touchton, & Whitford, 2011; Pellegata, 2012; Rose-Ackerman, 1999). Corruption distorts the formal system of rules and governance (Scott, 1972, p. 2), also destroys social capital (Rothstein & Eek, 2009), and has a negative impact on people's life satisfaction (Helliwell, 2006). Corruption is also an obstacle to efficiency, development and modernization (Kornai & Rose-Ackerman, 2004). Moreover, as Karklins (2005, p. 4) adds, corruption involves the loss of equal access to public power and position, which distorts the norms of equality and that leads to a loss of public trust and belief in the political system. In states, where the democratic norms and institutions are still in process of building, the distrust to public officials can be translated into disbelief in democracy per se. Corruption is also dangerous from the economic point of view. It can be a barrier to economic growth (World Bank, 1997b), it also negatively impacts the ratio of investment to GDP (Mauro, 1995; World Bank, 1997a) and the level of foreign investment (Wei & Wu, 2001). Corruption can also contribute to an uncertain business climate, can hold back state reform and can nourish organized crime (Rose-Ackerman, 1999, p. 17).

For these reasons, many social scientists have tried to discover and describe the root causes of corruption. This task is complicated by the fact that corruption is a clandestine activity, which makes it very difficult to measure and to detect its true effects, as well as its underlying causes. In fact, the real level of corruption is impossible to measure, as discussed in detail in Chapter 3, therefore the dependent variable used in all articles and books on corruption, as well as in this dissertation, does not measure corruption per se, but rather proxies. It is crucial to mention that the author of this dissertation understands very well that even the best statistical analysis does not guarantee the results to be completely reliable. However, in order to be able to discuss corruption and to present results, which might be close to reality, social scientists still do research on the topic of corruption but are aware of this problem. This approach is also taken in this analysis; acknowledging that corruption is rather hard to define, observe, and measure, but nevertheless undertaking the analysis, and at the same time being aware of the disadvantages.

Therefore in this dissertation, the term "corruption" is used even though it is rather perception of corruption or notion of corruption than the real corruption. It is therefore vital for the reader to keep this in mind; the results presented in this dissertation might be very close to reality, but it would be a mistake to assume that there exist means to measure the real level of corruption in a country.

Moreover, corruption is in this dissertation analysed only on the European level as opposed to including all the world countries into the analysis. Authors discussed in this dissertation suggest several variables as being connected to the level of corruption in a country. However, most of these authors conducted their research on a global level and they did not take into account different cultural backgrounds of the countries. Corruption is a very complicated phenomenon, and probably behaves differently in different cultural contexts. Cross-country analysis, which includes only European countries that share common culture, could show the validity of previous research. This dissertation therefore looks at whether the variables, which influence the level of corruption on a global level, behave similarly when tested only on a European level. Taking into account only European countries also allows for a more specific focus on a special case of post-communist countries, which were the last countries to have undergone the transition to democracy in Europe.

One would expect that European countries could have similar development of corruption, being culturally similar and geographically very close to each other. However, political and economic development of European countries was interrupted when communist regime divided Europe into west and east for almost half of century. States under communist regime developed under very different conditions. Today, 25 years after the fall of the iron curtain when Europe was reunited, thanks to the European Union and to globalization the countries are influenced by each other and united as never before. However, even after 25 years, European countries with a communist history have in general higher levels of corruption (Shleifer, 1997) than the rest of Europe and political corruption is there in fact a serious problem (Karklins, 2005; Kostadinova, 2012). It is suggested (Rose, 2001, p. 105; Rose-Ackerman, 1999) that corruption is the greatest obstacle to progress and to democratization in post-communist societies and that corruption may damage the public trust in the government and consequently may erode the legitimacy of the newly established democratic institutions (Kostadinova, 2012). The reason behind this phenomenon is still not clear and even though there is literature explaining corruption on a

global level, the application of these theories on the European level with a special focus on a difference between post-communist countries and the rest of Europe is underdeveloped. Moreover, literature focusing on the differences among post-communist countries concerning the reasons behind the corruption levels remains deficient (Karklins, 2005). That is therefore the crucial question, which remains unanswered until today. Hypotheses set by previous social scientists will be therefore tested on a dataset divided by the country's history. The results will show if post-communist countries today, more than a quarter of a century after the collapse of communism, behave as European countries which never experienced the rule of communism, or if there is a different pattern concerning corruption in these countries, which remains a puzzle not solved until today. Are post-communist countries different in their development and nature of corruption from the rest of Europe or can corruption be explained by classical theories, which work on the global level? As nobody has answered this question yet, this research is crucial not only from the academic point of view but also for policy reasons. If it is the case that classic theories do not work, it is pointless to base the policies on these theories. This dissertation therefore wants to fill the gap in research of corruption in the case of post-communist countries and answer the question whether post-communist countries behave similarly as European countries, which never had communist rule of if the corruption reality is significantly different.

1.1. Plan of this dissertation and research questions

This dissertation focuses on theories explaining corruption on the global level and tests whether these theories stand also in different contexts. First, they are tested on the European level and then it is tested whether the models hold also when tested on post-communist countries. Corruption in this dissertation is studied not on the individual level but at the aggregate level. Therefore is does not focus on the immense literature explaining corruption on individual level, the reasons an individual can have to take part in corruption, but it only focuses on the puzzle what the different reasons behind different levels of corruption are, whether there are any significant differences on the European level between countries with and without communist history. This dissertation also does not explore the differences within post-communist countries; however it does point out that those differences exist especially between some post-communist

countries with specific history or geographic location. These observations will help in future research on reasons behind different levels of corruption and in research on development of corruption in time within post-communist countries.

Chapter 2 (Theoretical part) discusses various definitions of corruption made by international institutions, by academics, by law, and by the authors of the indicators measuring corruption. It also offers typology of corruption and distinguishes different stages of corruption. Moreover, the definition used in this dissertation is selected and discussed. This chapter also scrutinizes theories and results of the literature up until today and discusses whether these theories could be helpful in answering our research questions. The chapter is divided into two theoretical areas, first, it discusses theories, which explain corruption from the structural point of view, such as the influence of institutions and governance, income inequality and GDP per capita. Authors of these theories believe that the structural influence is more important than cultural influence or the influence from the individual level. On the other hand, there exist theories believing the opposite, that culture and variables on the individual level explain corruption better than structural theories. Among these, the influence of religion, specifically Protestantism, values or generalized trust are discussed most frequently. Moreover, this chapter does not discuss these theories only from the general point of view, but also proposes hypotheses on how might post-communist countries differ from the rest of Europe concerning the effects of these variables. For example, GDP and income inequality differ significantly between post-communist countries and countries which have never experienced communist rule, it is therefore expected that the strength of the influence might be rather different. Similar applies for institutions, values and trust. On the other hand, religion does not differ significantly between the two analysed groups; therefore the influence might have a similar strength.

Chapter 3 (Methodological part) discusses the methods for studying corruption as still being one of the most challenging segments of study of corruption. This chapter is very lengthy which mirrors the extensive problematic of measuring corruption. This dissertation presents three generations of corruption indicators (composite indices; public opinion surveys and company surveys; and indicators based on hard data) and discusses the advantages and disadvantages of each type of indicator. Then, with the help of qualitative and quantitative assessment, the best

indicator out of the wide selection of indicators today is selected (Control of Corruption by the World Bank), which is then used as the main indicator in the analytical part of this dissertation.

Chapter 4 (Analytical part) is divided into two main section, firstly it describes the scene of corruption in Europe; it presents the state of corruption and the development of corruption since the 90s'. Special focus is on post-communist countries, in general, post-communist countries have even today much higher levels of corruption than the rest of Europe, even though they have democratic system and are well connected to the western world. Corruption during communism is discussed and also transition years and their possible influence on corruption are investigated. This chapter shows that there are indeed important differences in corruption between post-communist countries and the rest of Europe even today and that communism played a specific role in the development and level of corruption today. Second section of this chapter presents several models using regression analysis, which show whether corruption in Europe can be explained by the same theories as those are used on the global scale. Results are investigated and discussed. Then, the dataset is split according to the fact whether country has or not communist history, the same models are then presented. Finally, multilevel methods are used for strengthening and supporting the previous analysis.

Chapter 5 concludes with the findings of this dissertation. The author reaches conclusion that not all variables, which were found to be important predictors of corruption on a global level, are also important in the case of European countries. In fact, the regression analyses showed that important predictors in the case of European countries, both in post-communist countries and the rest of Europe, are mostly cultural variables – norms and religion, while there are important differences in economic variables between post-communist countries and the rest of Europe. It seems, that even after a quarter of a century after the fall of communism, the legacy of communist rule is still a very important factor in today's level of Control of Corruption.

This dissertation will try to answer the following two research questions. These research questions will be transformed into several hypotheses based on previous research on the global level. These hypotheses are presented later in this dissertation.

Research questions:

Is there a difference in the level of corruption and in the links between corruption and other variables between post-communist countries and the rest of European countries?

What are the reasons behind these differences (if there are any)? Is there any pattern in the development of corruption?

2. THEORETICAL PART

In this chapter discuss first the problematic definition of corruption and ways, which can help us define corruption, are discussed. Next, different theories that can be helpful in explaining corruption are discussed. Firstly, this chapter focuses on theories explaining corruption in general, specifically: it will present two main approaches to corruption – cultural and structural approach. Then the specificities of communism and its influence on corruption are discussed under each respective theory. Various theoretical approaches can clear up which factors might be important in answering the research question whether post-communist countries have any specificities in the corruption analysis.

2.1. Defining corruption

First, to be able to study corruption, it is important to define it. Even though there exist many different definitions of corruption, there is still none that would be agreed on by the entire academic community, nor by international organizations (OECD, 2008; United Nations, 2004). Corruption can be defined by the law, by the affected public, by the public opinion, by the leaders, or by the people actually holding public office. Every definition or perception of corruption can be different according to the exposure to, involvement, and experience with corruption.

Moreover, corruption can be observed on a grand level where politicians and international players are involved, on a business level where companies are involved, or on the individual level as petty corruption, when the general public gets involved. There are also several different forms of abuse of power by public officials such as bribery (giving recompense to a recipient in exchange for an alteration of their behaviour), cheating, conflict of interest, manipulation, nepotism (a civil servant gives a position in his office to a relative rather than to a better-qualified applicant), clientelism (exchange of goods and services for political support), or patronage (political party which wins the elections removes office-holders supporting opposition

party) (Heidenheimer & Johnson, 2002, p. 27). Similar and even more detailed typology of forms of corruption is offered also by Holmes (1993) or Kornai and Janos (2004).

Another important distinction can be made from the point of how corruption is widespread in a country. The World Bank distinguishes corruption as either systemic or isolated (1997a). When corruption is isolated, it is rare; the norm is not to be corrupt, and cases of corruption can easily be tracked down and punished. On the other hand, where corruption is systemic, formal rules still exist, but they are superseded by informal rules. As the World Bank adds: "It may be a crime to bribe a public official, but in practice the law is not enforced or is applied in a partisan way, and informal rules prevail" (1997a, p. 13). Similar distinction offers Frič, who however, presents four types of corruption in connection to its prevalence in a country (Frič, 1999). According to him, first stage is random corruption (in the World Bank definition this would be the isolated corruption), where the vast majority does not participate in corruption and the cases of corruption are very rare. Second stage is spontaneously regulated corruption, in this stage corruption starts to be widespread in more areas and it is not as punished as in the first stage. Third stage is organized corruption, where corruption takes the form of organized crime; there exist chains of organized individuals who all work with the means of corruption. Finally, the last stage is systemic corruption; in this stage the state institutions are so used to corrupt practices that they basically cannot work without corruption. In this case, the state becomes corrupt state per se.

Another crucial problem with defining corruption might be that the very understanding of corruption can be, and most surely is, culturally determined and therefore vastly diverse across different countries and cultures, thus making definition even more difficult (Charron, Lapuente, & Rothstein, 2013, p. 22). Even though researchers suggest that morality is shared across cultures and therefore it is understood universally that participation in corruption is wrong and that the right for fairness should be universal (Rothstein & Torsello, 2013) others warn that corruption is researched only from the western point of view and that the conclusions do not fit different cultures. What is understood as corrupt behaviour in one country may be considered as a standard behaviour in another country (Bukovansky, 2006; Heidenheimer & Johnson, 2002; Rothstein & Torsello, 2013; Thompson & Shah, 2005). Also for this reason, this dissertation is focusing only on Europe, which shares common history and similar culture, because comparing countries, which are more different from each other, might lead to biased conclusions. On the

other hand, even in such small area as Europe with very homogeneous culture, the historical consequences of communism are so important, that the reasons and development of corruption are probably very different in these two groups of countries. Therefore one still has to be aware of problematic cross-country comparisons due to the possibility of differences in publics' understanding of corruption.

However, even though there are problems with defining corruption, there are sound attempts to define it. One of the most straightforward and clear attempts to conceptualize corruption was done by Heidenheimer et al., who published a typology of corruption in which they described three ideal-types of corruption based on previous academic research (Heidenheimer, Johnson, & Levine, 1989). According to them, first ideal type is public *office-centred* corruption, which is a behaviour, which "deviates from the normal duties of a public role because of private-regarding (family, close private clique), pecuniary or status gains; or violates rules against the exercise of certain types of private-regarding influence. This includes such behaviour as bribery (use of reward to pervert the judgment of a person in a position of trust); nepotism (bestowal of patronage by reason of ascriptive relationship rather than merit); and misappropriation (illegal appropriation of public resources for private regarding uses)." (Nye, 1967, p. 419) This definition seems plausible, however, as Heidenheimer et al. warn, they might be different reasons for corruption than those mentioned by Nye, such as gain for political party or other body and moreover, corrupt practices do not have to necessarily violate any formal rules because many countries differ in the law definition of corruption (Heidenheimer & Johnson, 2002, p. 26). A similar logic of reasoning in their definition provide Kurer (2005) or Cupit (2000) who focus on impartiality in the public office, meaning that the holder of public office must be impartial or non-discriminatory in exercising of his/her power. Consequently, definition of corruption is as follows: "Corruption involves a holder of public office violating the impartiality principle in order to achieve a private gain" (Kurer, 2005).

Second type of definition of corruption is *market-centred*, as Van Klaveren says: "A corrupt civil servant regards his (public) office as a business, the income of which he will seek to maximize. The office then becomes a "maximizing unit". The size of his income depends upon the market situation and his talents for finding the point maximal gain on the public's demand curve." (Heidenheimer et al., 1989) This definition derives from the rational choice theory which is discussed later in this dissertation.

Finally, *Public Interest-centred* corruption definition by Friedrich, who says: "The pattern of corruption can be said to exist whenever a power holder who is charged with doing certain things, i.e., who is responsible functionary or officeholder, is by monetary or other rewards not legally provided for, induced to take actions which favour whoever provides the rewards and thereby does damage to the public and its interests" (1966). This definition does not distinguish the motivations behind the corrupt activity but provides a clear-cut guideline to further research. However, even this definition is not perfect as the motivation for corrupt behaviour does not have to be for one's own private gain, but for the benefit of one's party, friends, family and so on (Tanzi, 1998).

Another cluster of definitions can be found among surveys and composite indices, which aim to measure corruption. These definitions are much shorter for practical reasons, but substantially closest to the Public office-centred definition. Composite indicators[1] usually use variations of a simple definition very often used by scholars, which is "the abuse of public power for private benefit" (Treisman, 2000; World Bank, 1997a). This definition is also almost identical to the one used by the Transparency International (TI) in Corruption Perception Index (CPI), which defines corruption as "the abuse of entrusted power for private gain" (Transparency International, n.d.). World Bank (WB) understands Control of Corruption (CC) as that it "captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests" (World Bank, n.d.). These differences are too small to significantly change the understanding of corruption therefore it is safe to compare the different measures and indices.

Public opinion surveys focusing on corruption perception differ in their definition of corruption. There exist two types of questions focused on corruption. First of them is asking on the perception of corruption and second on the direct experience with corruption. These public opinion surveys will be further discussed in the methodological chapter. Some of the public opinion surveys focusing on corruption, such as ISSP, World Values Survey (WVS), or Global Corruption Barometer (GCB) do not define corruption in their questionnaires, leaving the understanding of the term corruption on respondents. Eurobarometer, on the other hand, define

[1] Composite indicator is one proxy for measuring corruption, to this type of indicator we can include for example CPI (Corruption Perception index) by Transparency international or CC (Control of Corruption) by the World Bank. These indicators are in detail discussed in the methodological part of this dissertation.

corruption for respondents: “From now on, when we mention corruption, we mean it in a broad sense, including offering, giving, requesting and accepting bribes or kickbacks, valuable gifts and important favours, as well as any abuse of power for private gain” (European Commission, 2014). Moreover, in the question on the corruption perception, Eurobarometer does not ask on corruption, but the question is worded as follows: “In (your country), do you think that the giving and taking of bribes, and the abuse of positions of power for personal gain, are widespread among following?”, one can see that the definition is very similar to the one used by TI. Finally, European Social Survey (ESS) asks only on bribes, the question in the questionnaire is: “How often do police [judges] in country take bribes?” (ESS).

Public opinion surveys analysing experience with corruption analyse only bribery, however, even there are differences. ESS and ISSP asks for experience with “favour or bribe”, Eurobarometer and GCB only with “bribe”. Moreover, GCB asks whether respondent or family “paid” a bribe whereas ISSP, Eurobarometer, and ESS ask only whether anyone has experienced “request” or even “hint” for bribery. One can see that in the experience-based measures there might be a significant difference between GCB and the rest of indicators, as being requested a bribe is a very different concept from actually paying the bribe. One can easily see that there might be a problem with the exact definition with corruption. Whereas experience-based public opinion surveys measure only bribery, which is just a minor part of corruption, perception surveys aim to measure grand corruption, however, as seen by the public, which is usually not in contact with corruption on this level.

It is clearly visible that the definition of corruption is extremely problematic, there exist numerous definitions of corruption and different authors use them in different types of theories. None of these definitions is agreed on generally and each of them has some flaws. As this dissertation presents various theories, which use different definitions, and indicators, which are operationalized differently, it is not possible to settle on one definition of corruption. It is certain that the lack of clear definition of corruption is problematic not only for the theoretical background of the differences between the level of corruption in post-communist countries and the rest of Europe, but also in the analytical part, where these differences are actually tested. For the purpose of this dissertation, the type of definition used by the World Bank in their indicator Control of Corruption will be used because this definition is the most widely used in the texts theoretically and empirically focusing on corruption (World Bank, 1997a).

However, as there is no definition agreed on universally, it is still crucial to carefully examine the results and discuss whether the differences might be due to different definitions of corruption.

2.2. What influences corruption?

There exist many theories trying to explain the causes of corruption and which try to answer the question why in some societies corruption is more widespread than in others. Many authors examined particular countries, but cross-national research measuring the causes of corruption on a global level is much more difficult to carry out and therefore the literature is not immense. However, there are still some studies concluding that there are several variables influencing the level of corruption (or the perception of corruption in most cases) on a global level. However none of these theories is accepted by all social scientists and until today there is vast discussion about plausibility of each of these theories. Probably the most frequent question is whether corruption is cultural or institutional (Mungiu-Pippidi & Dadasov, 2015), in other words, whether the influence on corruption comes from the individual and his culture or from the system or structure. Structural influence means that institutions or macro issues influence the way people behave, for example wrong laws make it easy for bribes to take place or that boosting economy lowers the incentives for corruption. The opposite approach is cultural influence, which puts into the centre of attention culture and more importantly, individual choice of each person. These theories argue that culture of society is behind the reasons for corruption and bribery, for example high trust within society might inhibit corruption or that moral values connected to religion are important in individual's choice to bribe or not. Obviously, the truth would be probably somewhere between these two approaches, the level of corruption is most likely influenced at the same time by institutions and structure, such as quality of laws, economic situation and by culture, such as values or trust.

2.2.1. Structural approach

As mentioned above, first set of theories explain corruption from the top to down, meaning that structural or governmental factors can explain the extent of corruption, and also the success of the fight against corruption. These theories argue that these factors are more important in influencing corruption than cultural factors. There exist two main theoretical areas in the literature, one is governance or the institutions and their quality and second is the economic situation, in our case GDP per capita and income inequality. Obviously, these different influences are interconnected, the quality of institutions can influence economic performance and vice versa (Acemoglu & Robinson, 2008; Lomborg, 2004), it is therefore impossible to define precisely the amount of influence of each variable on corruption and also which variable came first in the chain of influences.

There are several other structural variables which were empirically observed to be correlated with corruption, such as common law legal system (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1999), Britain's former colonies (Treisman, 2000), or country oil reserve (Arezki & Bruckner, 2009). However, none of these variables are relevant in the case of European countries, because there is very low variability; it is often only one or two countries, which differ from the others, which would hinder the analysis.

2.2.1.1. Institutions – corruption as a system

First set of theories within the structural approach is connected to institutions. According to these theories, institutions and the way of governance influence corruption and the success of fight against corruption. As mentioned above, it is not the individual person who decides whether or not he wants to bribe, but it is the system, which enables or prevents people from doing so. These theories therefore argue that the individual level is not as important as the system level. One of the authors suggesting that the institutions might be the driving force is a Nobel Prize winner Douglass North who distinguishes between "limited access orders" and "open access orders" (North, Wallis, & Weingast, 2006). According to North et al., open access orders are

characterised by competitive market or by competitive multi-party democratic political systems. Moreover, the state has a monopoly over violence and society respects that. Limited access orders, on the other hand, work differently. The state does not have monopoly over violence and elite groups try to capture power. Political elites control resources and divide them among themselves, and not to everyone in a state. According to North et al, limited access orders can be found among less developed countries and open access orders mostly among developed wealthy countries (North et al., 2006).

One of the most systematic argumentation, which is based on North et al. theory, is presented by professor Alina Mungiu-Pippidi who looks at the institutions over time, observes their change within countries and tries to find the key institution change which can bring societies to the point where they are capable of controlling corruption and achieving good governance (Mungiu-Pippidi, 2016). Mungiu-Pippidi believes that countries perceived as extremely corrupt, ranked at the bottom of international indicators measuring corruption, do not differ significantly from countries with low corruption in the number of people engaged in corrupt activities, but by their institutions, as she argues, by "the rules of the game influenced by power distribution and the shaping of allocation of public services" (Mungiu-Pippidi, 2015b). Her argument lies on the premise that the basic type of governance is not universal, but particular, public resources are open only for selected individuals, she call this "the natural state" (Mungiu-Pippidi, 2015b). However, over time the access to public services opens to a wider selection of individuals and finally, her ideal type is when the access to public services is open to all citizens equally. Mungiu-Pippidi distinguishes governance regimes into four ideal types by the extent of access to public services as seen in Table 1. This theory connects the idea of North discussed above. First type is Patrimonialism, which is type of governance that does not guarantee any access of public to resources, this type corresponds to Weber´s patrimonialism (1920). A ruler holds power and public resources are allocated according to his/her will, therefore there is no public access to the resources. On the other side of the axis, the opposite ideal type is Universalism where the state is not captured by any specific group and where citizens rule the state. Public resources are open to everyone equally and nobody is discriminated in their will to access them. What is private and public is very clearly distinguished, therefore corruption is also very low. As Mungiu-Pippidi correctly mentions, Universalism corresponds to Dahl´s polyarchy (1992) or Popper´s Open society (1966). Between these two ideal types lie two types of governance regimes, which are on

the path from Patrimonialism to Universalism, however, still categorized under limited access order. One of them is Competitive particularism and other is Borderline. Competitive particularism is a type of governance which takes the first step towards Universalism in a way that elections are introduced, the state is no longer captured by one ruler, but citizens have a say. Obviously, the governance regime is still very problematic, elections could be corrupt and the winner party could capture public resources, which are then again not guaranteed to everyone, but rather to the winner party and its allies.

Table 1: Governance regimes and their main features

	Limited access order			Open access order
	Patrimonialism	Competitive particularism	Borderline	Universalism
Power distribution	Hierarchical with monopoly of central power	Stratified with power disputed competitively	Competitive with less stratification	Citizenship
State autonomy	State captured by ruler	State captured in turn by winners of elections	Archipelago of autonomy and captured (islands)	State autonomous from private interest (legal lobbying etc.)
Public resource allocation	Particular and predictable (extractive)	Particular but unpredictable (extractive)	Particular and universal (norm competition)	Ethical universalism (inclusive)
Separation private/public	No	No	Poor	Sharp
Relation between formal/informal institutions	Informal institutions substitutive of formal ones	Informal institutions substitutive of formal ones	Competitive and substitutive informal institutions	Informal institutions inly complementary to formal ones
Mentality	Collectivistic	Collectivistic	Mixed	Individualistic
Government accountability	No	Only when no longer in power	Occasional	Permanent
Rule of law	No; sometimes 'thin'	No	Elites only	General; 'thick'

Source: (Mungiu-Pippidi, 2015b, p. 29)

Finally, Borderline is according to Mungiu-Pippidi not governance type per se, but rather fuzzy category of governance types which are at the doorstep of Universalism. The state is not captured by one ruler or by a particular group, but there is more competition. Also, there is already some distinction between public and private; however the borderline is not clear. Mungiu-Pippidi stresses that it is not only the way the institutions are established, but also the norms in which the institution operate. Mungiu-Pippidi even categorizes countries on the basis of their governance

type into three categories, neo-patrionalism, competitive particularism and universalism; therefore she merges the two middle ideal types into one. Her sources are Freedom House, which measures how free are countries, this indicator is frequently used as indicator for democracy, and indicator Control of Corruption by the World Bank, which is in detail discussed in methodology chapter (Chapter 3). European countries are presented in Table 2. One can see that there is almost perfect division between post-communist European countries and the rest of Europe, only Greece and Italy are categorized in the competitive particularism with post-communist countries, and on the other hand, Estonia is among countries defined as universalistic.

Table 2: Governance types by countries

Neo-patrimonialism	Competitive Particularism	Universalism
Belarus	Albania	Austria
Russia	Bosnia and Herzegovina	Belgium
	Bulgaria	Cyprus
	Croatia	Denmark
	Czech Republic	Estonia
	Greece	Finland
	Hungary	France
	Italy	Germany
	Latvia	Iceland
	Lithuania	Ireland
	Macedonia	Luxembourg
	Montenegro	Malta
	Poland	Netherlands
	Romania	Norway
	Serbia	Portugal
	Slovak Republic	Spain
	Slovenia	Sweden
	Ukraine	Switzerland
		United Kingdom

Source: (Mungiu-Pippidi, 2015b, pp. 259-264), data are from 2012. Neo-patrimonialism is when counties are ranked "not free" in Freedom House´s index a Control of Corruption index below 3,3 (on the scale 0-10). Competitive particularism are countries ranked as "free" or "partly free" with Control of Corruption score between 3,3-6,6. Universalist countries are ranked as "free" and have score of Control of Corruption higher than 6,6.

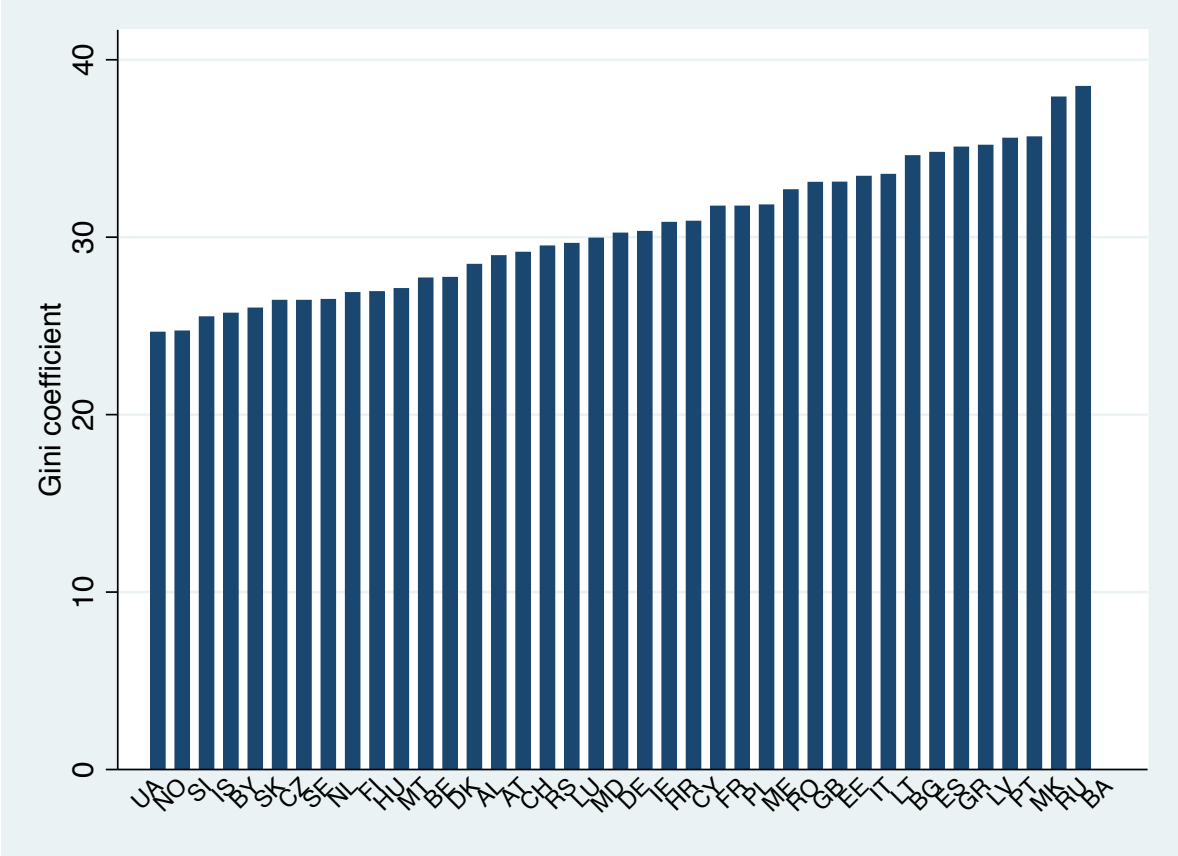
Another author who focuses on the institutional influence on corruption is Bo Rothstein who also believes that corruption is not principal agent problem but collective action or social trap problem (Rothstein, 2011). According to this theory, people engage in corrupt practices if they think that most other agents do the same, if they believe that being corrupt is the system (B. C. Smith, 2007). This brings us into concept of rational choice theory, however on the aggregate level. There can be therefore discrepancies between individual rationality and aggregate outcomes, as it is important to take into account not only that all agents are rational, but also that they take into account in their decisions what they believe would be the most likely behaviour of the other agents in general (Aumann & Dreze, 2005). This brings us back to the problem of the system in which institutions and society works. According to these theories it seems that individual is powerless, the behaviour is controlled by the system, which sets the rules of the game. It is not norms of individual, but norms of the institutions and the system overall. Rothstein takes this problem one step further and presents results of the case study of Sweden where he explains how the system in Sweden changed from corrupt to not corrupt (2011). He posed question how the norms of corruption can be changed when corruption is systemic? When one lives in a system, where giving bribes is expected, he/she has to give bribe in order to get basic services, such as education or doctor appointment even when knowing that giving bribes is morally wrong. As Rothstein says, it is "a deeply held system of beliefs about what can be expected of other agents" (2011). It is therefore the question of finding the reason that produces the change in the system. According to the case study of Sweden in the 19th century by Rothstein, the game changer is a "big-bang" type of change. This means that this change must be extremely big and fast to succeed in eradicating the norms and system of the corrupt institutions and replacing it with new ones. In the case of Sweden in the 19th century, this was connected to the dramatic institutional changes following military defeats, which threatened the very existence of Sweden. These institutional changes did not aim to lower corruption but lower corruption was a by-product of these dramatic changes into more universalistic state. According to Rothstein, this is the only receipt for lowering corruption; small institutional changes would only end in "social trap situation worsening the problem" (2011). Unfortunately, Rothstein's analysis was done only as a case study therefore it does not allow for cross-country analysis.

2.2.1.2. Income inequality

There are quite a number of papers focusing on the relations between corruption and inequality. Most of researchers agree that there indeed is a very important relation; the results of quantitative analyses suggest that in countries, which have higher corruption, there exists also higher inequality. Some authors also suggest that containing inequality might be a plausible method for lowering corruption (Rose-Ackerman & Soreide, 2006). However, the relationship is probably not that simple, corruption is likely to be the consequence but also the cause of inequality (Husted, 1999; Rose-Ackerman & Soreide, 2006, p. 23). For example, Gupta et al. (2002) found a significant correlation between income inequality and corruption on a selection of 37 countries. The authors argue that corruption increases inequality; in fact, an increase of one standard deviation in corruption increases the Gini coefficient of income inequality by 11 points. On the other hand, You and Khagram (2005, p. 70) argue that inequality increases corruption as well. They say: "Income inequality increases the level of corruption through material and normative mechanisms. The wealthy have both greater motivation and more opportunity to engage in corruption, whereas the poor are more vulnerable to extortion and less able to monitor and hold the rich and powerful accountable as inequality increases" (2005). You and Khagram suggest that inequality increases corruption more strongly in democratic countries where the powerful are forced to hide their dishonest corrupt activities, whereas in autocratic regimes the powerful can oppress the poor without having to hide it (2005). This implies that the effect of income inequality might be less strong in post-communist countries in comparison to European countries, which have never experienced the communist rule. But on the other hand, Li et al. (2000) found that higher the level of corruption, the stronger is the correlation between corruption and inequality. Therefore this might suggest that post-communist countries, which have high levels of corruption, might have also higher levels of inequality. However, as Charron et al. (2013) show in their model, corruption and inequality are indeed strongly correlated, however, some European countries have low inequality but high corruption such as Bulgaria, Slovenia and Slovakia, which puts doubts on the relationship between inequality and Control of Corruption in the specific case of post-communist countries. Another author closely focusing on the relation between corruption and inequality is Uslaner, who presents concept of income inequality trap. Uslaner claims that the roots of corruption lie in the unequal distribution of

resources in society (2009, p. 127). Uslaner argues that there is an indirect link between economic inequality and corruption through trust; inequality lowers trust which increases corruption (Uslaner, 2008). However, Uslaner does not include post-communist countries into his model. Finally, the case of post-communist countries concerning inequality might be specific also due to the fact that communist ideology increased equality in certain countries, therefore after the fall of communism the majority of citizens were educated and income was distributed relatively equally, which meant that the population was capable of participating in a modern state and economy (Kornai & Rose-Ackerman, 2004).

Figure 1: Income inequality measured by Gini coefficient in 2010-2014



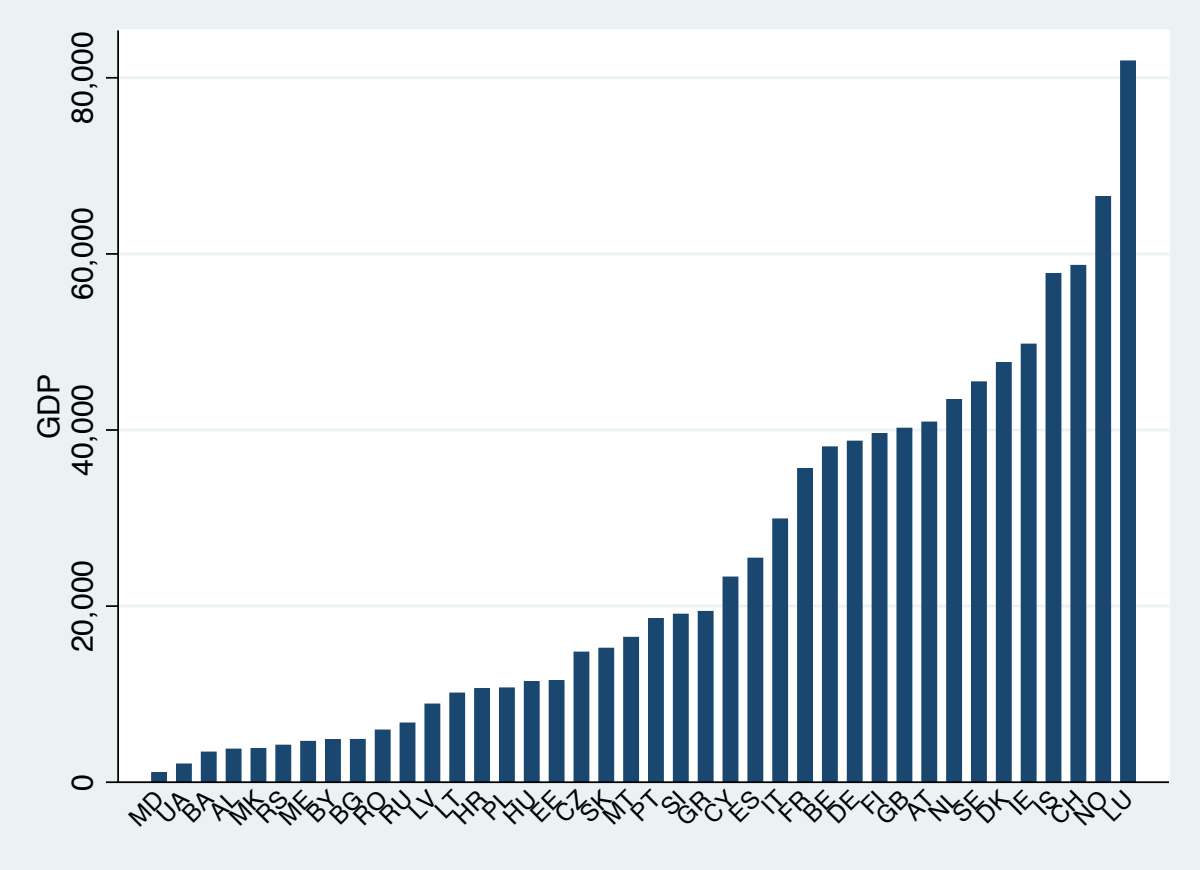
Source: UNU- WIDER and Eurostat, average 2010-2014.

Figure 1 shows that there is no clear distinction in income inequality between post-communist countries and the rest of Europe; however, this does not tell us anything about the influence on corruption which can still be very important.

2.2.1.3. GDP per capita

Next, GDP per capita is very likely connected to the level of corruption as suggested by many authors. For example Kaufmann et al. (1999, p. 15) found that countries with higher GDP per capita have lower levels of corruption; a similar effect was also observed by other authors (Gupta et al., 2002; Lambsdorff, 2003; Treisman, 2000). However, as Drury et al. (2006) found out, GDP and corruption are related only in non-democratic regimes. It is indeed important to analyse whether their hypothesis works also in the case of Europe, whether post-communist countries have much higher influence of GDP to corruption than countries without the legacy of socialism. Moreover, as in the case with inequality, it is not clear in which direction this influence goes. Poor countries could be lacking resources for fighting corruption, and, consequently, high levels of corruption could inhibit the growth of GDP so the countries remain poor (Husted, 1999; Paldam, 2002).

Figure 2: GDP per capita, 2010-2014



Source: WB, average 2010-2014.

Moreover, high corruption can deter foreign investment in a country causing the GDP per capita to decline (Mauro, 1995). Figure 2 shows that in average post-communist countries have lower GDP per capita than the rest of Europe, and the exact strength of the influence of GDP on corruption will be discussed in detail in the analytical part.

2.2.2. Cultural approach

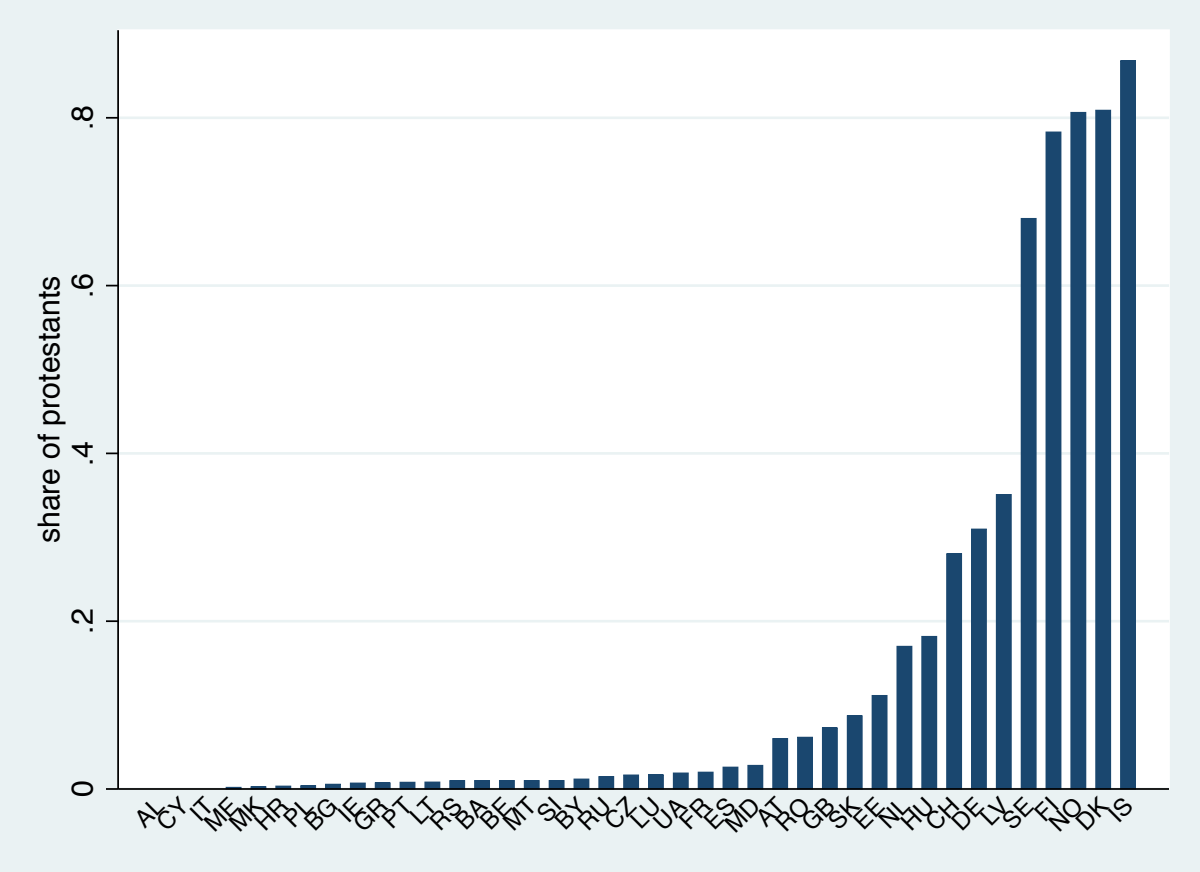
Theories in this approach focus on culture and its influence on the level of corruption in a country. The authors of this approach look at different cultural traditions and values as sources or reasons for corrupt activities. The idea is that some societies have such culture factors, which are related to behaviour promoting corruption (Wraith & Simpkins, 1963). As discussed in this chapter, these factors might be very different, from values to trust. One of the most prominent examples is for example Banfield's concept of amoral familialism (1958), which is a concept inspired by Italian village where inhabitants lacked completely the notion of social capital and put the interests of their own family much higher than those of society, or Weber's Protestant spirit (1920) discussed in detail below.

It seems that cultural factors might be very helpful in explaining different levels of corruption in different countries, and they might be equally helpful in explaining the boost of corruption in post-communist countries. Does communism bring different culture, which gives incentives to people to start behaving corrupt? The problem is that cultural factors change very slowly, however, was communist rule long enough in order to change culture? Moreover, due to the low variance of cultural factors over time, it is perceived that cultural factors influence corruption, and not the other way around (Rose-Ackerman & Soreide, 2006, p. 17). There are several cultural factors, which are found to be plausible in explaining the level of corruption, and those are religion, interpersonal trust, and values.

2.2.2.1. Religion

Weber writes about a religion's influence on an individual and society in his famous book *The Protestant Ethic and the Spirit of Capitalism (1904)*. Weber argues that the economic growth of Protestant countries was enabled thanks to different values of Protestants compared to other religions. This can be used in the study of corruption as well. In fact, La Porta et al. (1999) found that countries with a predominant Protestant population have lower corruption levels than countries which are predominantly Muslim, Orthodox, or Catholic. This hypothesis was supported also by Treisman (2000) in his paper. Moreover, La Porta et al. (1999) also provide evidence that Catholicism, Orthodox Christianity, and Islam are more "hierarchical" and less individualistic, and exhibit inferior government performance which might explain higher levels of perceived corruption.

Figure 3: Share of Protestants in European countries – 2010-2014



Source: ARDA, average 2010-2014.

Protestants are more individualistic compared to Catholics, Orthodox Christians, or Muslims, who have stronger family ties and therefore operate more on a level of connections and ties, which can serve as a ground for corrupt activities. Also, Protestant religion was formed as an opposition to state-sponsored religion, may be more alert to abuses of power by the state officials (Svensson, 2005). This would suggest that countries, which are more protestant, would be less corrupted. However, it seems that this theory would not help with the differences between post-communist countries and rest of Europe. Protestantism is present in post-communist countries and in countries, which have never experienced communist rule as well (Figure 3). However, the strength of influence might be different as communist regime was anti-religious in general.

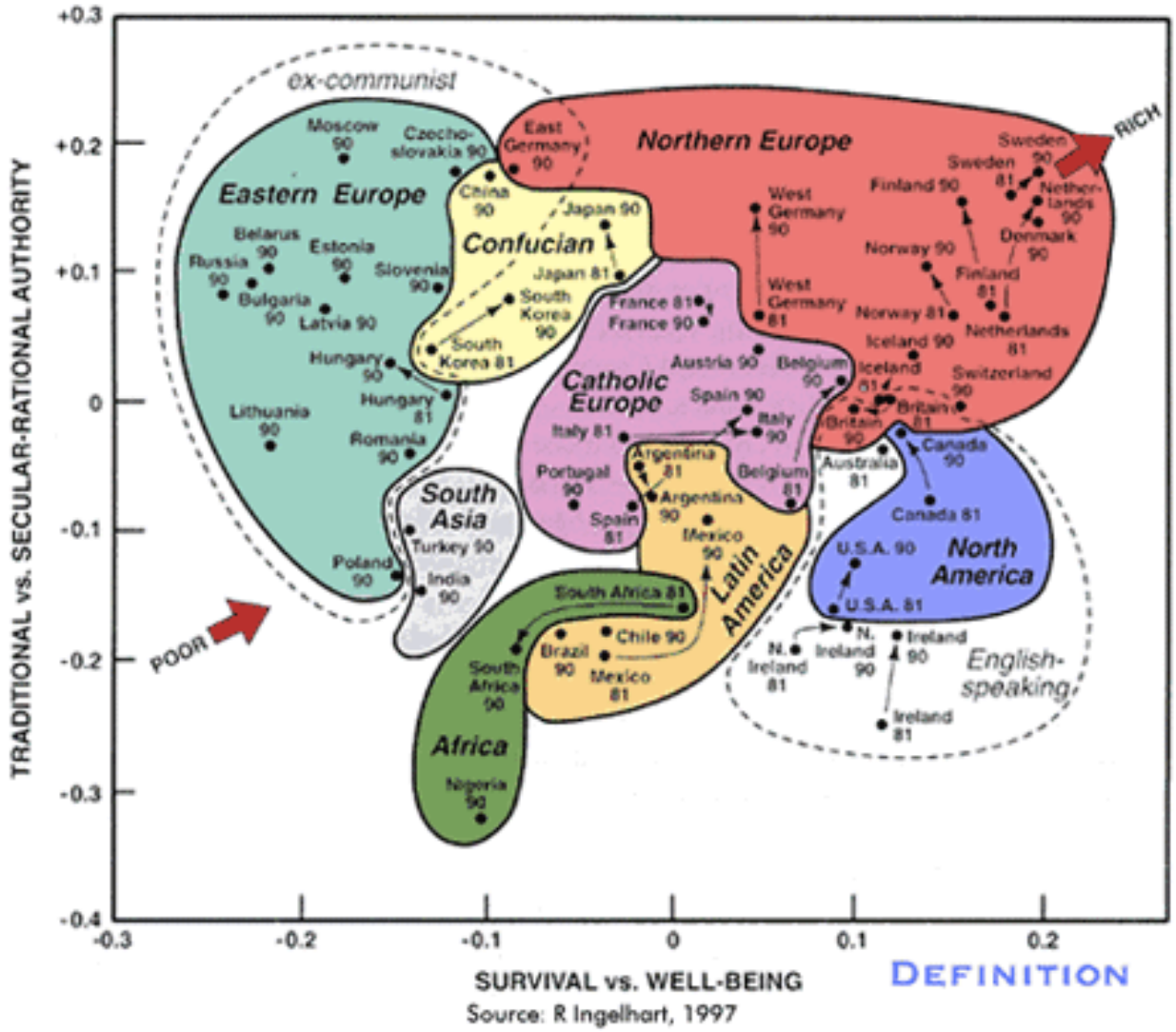
2.2.2.2. Values

Values seem to have significant importance in their influence on corruption. According to Weber, values are "the actions of persons who, regardless of cost to themselves, act to put into practice their convictions of what seems to them to be required by duty, honour, the pursuit of beauty, a religious call, personal loyalty, or the importance of some 'cause' ... value-rational action always involves commands or demands which, in the actor's opinions, are binding on him." (Weber, 1920). Different values can influence corruption differently as already seen in the subchapter on religion. One of the most discussed value change in our world is modernization, which involves change in basic values of society. It is not the result of the deviance in behaviour from accepted norms, but deviance of norms from the established patterns of behaviour (Heidenheimer & Johnson, 2002, pp. 254-255). Another approach in the study of values is connected to postmaterialism, which has been studied for example by Inglehart (1997) or by Sandholtz and Teegapera (2005). Inglehart analyses value change in 43 societies and comes with an observation that there exist clusters of countries falling into specific value categories (Figure 4), with almost all post-communist countries being in the top left corner signalling that they indeed share different values than the rest of the world.

In post-communist countries, there is strong emphasis on the secular-rational authority (however, this is the case for almost all European countries), but the difference from the rest of Europe is that people in post-communist countries show much higher support for survival values than

countries in Europe, which have never experienced communist rule. This is crucial for the study of corruption and for understanding why corruption is so much higher in post-communist countries. Sandholtz and Teegapera concluded in their analysis that survival values are connected to corruption much more than self-expression values (Sandholtz & Taagepera, 2005). As they say: "Communism created structural incentives for engaging in corrupt behaviours, which became such a widespread fact of life that they became rooted in the culture in these societies." (Sandholtz & Taagepera, 2005) Inglehart analysed data from 1990 till 1993, so very close after the transition, and Sandholz and Teegapera data from 1997-2001.

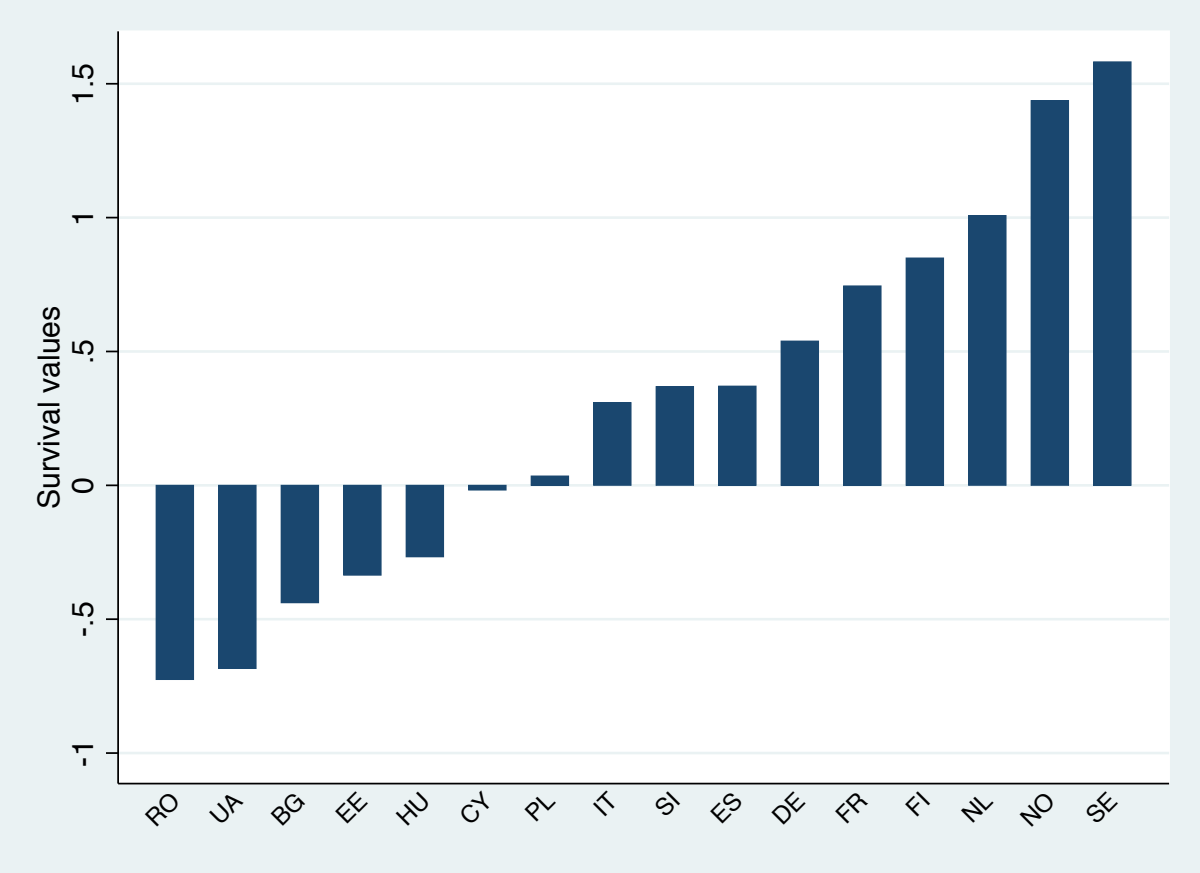
Figure 4: Values in the world



Source: Inglehart, Modernization and Postmodernization (1997, p. 93)

Similar findings on the aggregate level were presented for example by Welzel et al. (2003) or O'Connor and Fischer (2011). Figure 5 shows Inglehart's survival values on newer dataset. It is clear that even after 25 years, there is still division between post-communist countries and the rest of Europe. However, unfortunately, only few European countries participated in the WVS in the recent years therefore the dataset is quite poor even when taking into account time period of ten years.

Figure 5: Survival values in Europe 2005-2014



Source: WVS, average value of survival values between 2005 and 2014.

Another approach on values is presented by Schwartz (1992) who is the author of Schwartz Value Survey, which is currently the most widely used by social and cross-cultural psychologists for studying individual differences in values (Schwartz, 2007). Table 3 shows the ten values analysed by Schwartz.

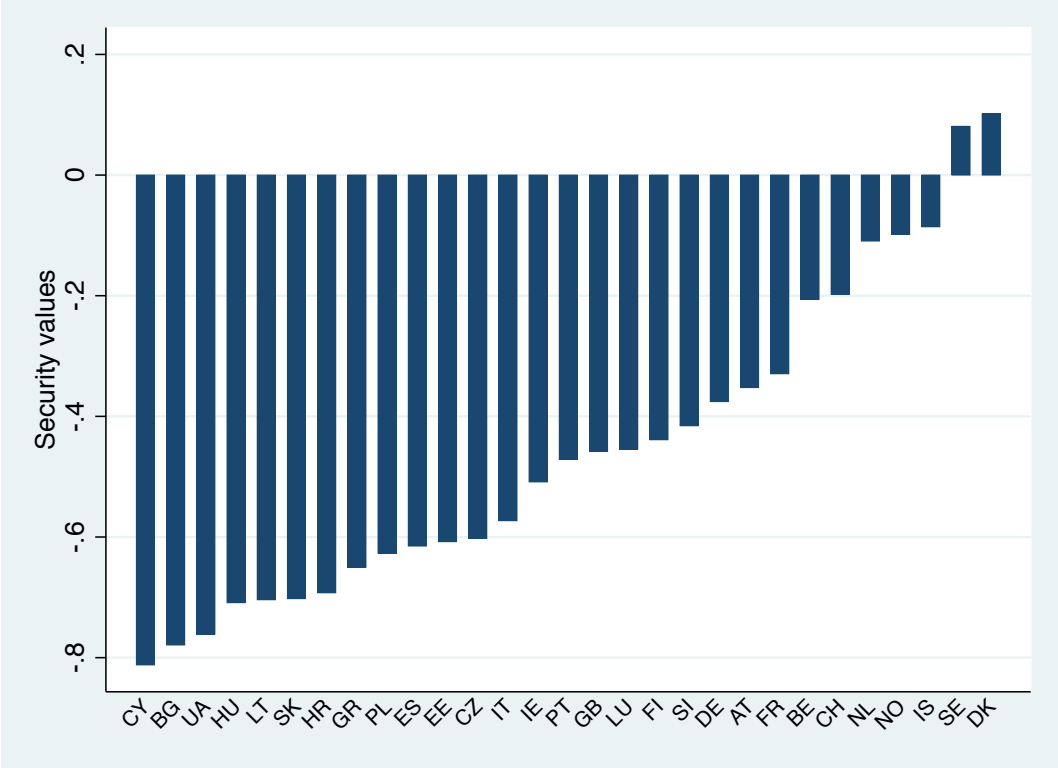
Table 3: Values - Schwartz

POWER: Social status and prestige, control or dominance over people and resources. (Social power, authority, wealth, preserving my public image)
ACHIEVEMENT: Personal success through demonstrating competence according to social standards. (Successful, capable, ambitious, influential)
HEDONISM: Pleasure and sensuous gratification for oneself. (Pleasure, enjoying life, self-indulgence)
STIMULATION: Excitement, novelty, and challenge in life. (Daring, a varied life, an exciting life)
SELF-DIRECTION: Independent thought and action-choosing, creating, exploring. (Creativity, freedom, independent, curious, choosing own goals)
UNIVERSALISM: Understanding, appreciation, tolerance and protection for the welfare of all people and for nature. (Broadminded, wisdom, social justice, equality, a world at peace, a world of beauty, unity with nature, protecting the environment)
BENEVOLENCE: Preservation and enhancement of the welfare of people with whom one is in frequent personal contact. (Helpful, honest, forgiving, loyal, responsible)
TRADITION: Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide the self. (Humble, accepting my portion in life, devout, respect for tradition, moderate)
CONFORMITY: Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms. (politeness, obedient, self-discipline, honouring parents and elders)
SECURITY: Safety, harmony and stability of society, of relationships, and of self. (family security, national security, social order, clean, reciprocation of favours)

Source: (Schwartz, 2007)

Even though none of these values is directly connected to materialism and post materialism, the comparative analysis of different value scales done on East and West Germany by Held et al. (2009) suggests that the value Security aligns to the Inglehart's concept. High score on security value predicts more modernization values and low score on Security value on the other hand predicts rather postmaterialist values. After checking the data, the author of this dissertation will use the Security values by Schwartz due to larger dataset.

Figure 6: Security values by Schwartz – 2010-2014



Source: ESS, 2010-2014

It can be seen from the Figure 6 that post-communist countries and the rest of European countries and on different ends on the scale, however, there exist some exceptions. For example Cyprus, Spain, or Greece are localized more among post-communist states and on the other hand the Czech republic or Slovenia are among countries, which have never had communist rule.

2.2.2.3. Generalised trust

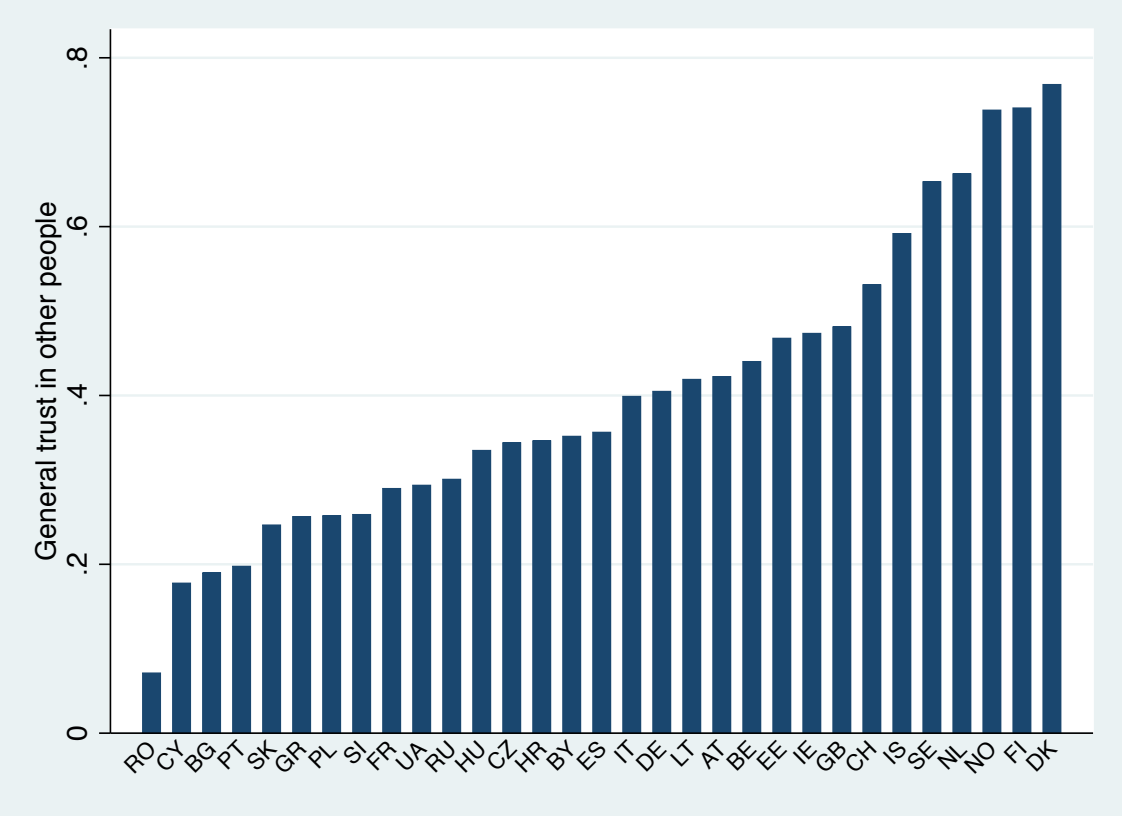
Trust among people can influence corruption as well. When people trust that other individuals are not corrupt they will not try to bribe or to cheat in other way. They trust that their access to the resources would be the same as for everybody else therefore there is no need to corrupt anybody. As suggested, high interpersonal trust is believed to be connected with lower levels of

corruption (Adsera, Boix, & Payne, 2003; Uslaner, 2005). La Porta et al. (1999) argue that higher levels of interpersonal trust might ease the communication between officials and the public and thus lower corruption. Bjornskov and Paldam (2005, pp. 59-75) constructed time series study studying the relationship between trust and corruption concluding that changes in trust (measured as social capital) can be the cause for changes in corruption. Moreover, Rothstein and Eek (2009) analysed the connection between trust and corruption in low and high corruption environment in Sweden and Romania with the results that "people in both countries, who experience corruption among public workers, while traveling in an unknown city, do not only lose trust in these authorities, but they lose trust also in other people in general" (Rothstein & Eek, 2009). Charron and Rothstein found the same result in their study of European regions (2014). Moreover, there is a danger of low trust trap, when person believes that public official is corrupt and that everybody will bribe him, he or she must bribe too and this lead to circle of bribery as nobody will dare to not bribe (Rothstein, 2005).

Figure 7 shows the average generalized trust in European countries. One can see that the variation in trust among European countries is rather big. The country with the lowest number of trusting citizens is Romania with only 7 % of people trusting others. On the other hand, in Denmark, almost 77 % of respondents trust other people.

However there is a very important difference between generalized trust in other people (macro-trust) and trust in one´s inner group (micro-trust). According to Kornai and Rose-Ackerman (2004), for corruption to take place, each of the participants must believe two things, first, that the other party will not disclose the corrupt behaviour to a party which might sanction this. And secondly, there must be trust that the other party will actually deliver the goods or services agreed on during the corrupt act, as it is not possible to sue the other party. Therefore as Rose-Ackerman argues, it is trust which depends on "close personal ties that depend on kinship, business links, or friendship" (Rose-Ackerman, 1999). However, there are also measures to ensure that the goods or services are delivered, such as Varese describes as the mafia-type enforcement agencies (1994).

Figure 7: Generalized trust in other people, 2010-2014



Source: ESS, average 2010-2014, share of respondents answering that they believe that 'most people can be trusted'

Therefore, high micro-trust can increase corruption while macro-trust can decrease it. In fact, as Lambsdoff believes, there are means in lowering micro-trust and therefore corruption among public officials, such as rotation of public administration or facilitating of whistleblowing (2002). Moreover, Uslaner observed a clear distinction between these two types of trust, while generalized trust is labelled as trust in most people (as in the case of a question posed in the ESS survey), and particularized trust, on the other hand, is labelled as "faith in people we know or we think we know" (Uslaner, 2002). In post-communist countries, there might be higher particularized trust combined with very low generalized trust, which would explain the non-significant effect in the model. This hypothesis is supported by Badescu who studied particularized trust in Bulgaria (2003). The combination of low generalized trust and high particularized trust may create a strong base for corrupt activities. Citizens might prefer to operate on informal levels using the ties of family friends whom they trust, rather than relying on strangers. This could increase the level of corruption in a country significantly. Unfortunately,

the datasets used in this dissertation do not pose any question on particularized trust, so this hypothesis is open for future research.

2.3. Communism and corruption

In this chapter we will look at the specific case of communism and theories, which can help us understand the possible reasons behind the development of corruption in post-communist countries. It seems that communist regime opens way to corruption and bribery (Kostadinova, 2012). The major reasons for this were institutional, including the facts that individual initiative and responsibility were strongly discouraged, competitions was suppressed, patronage thrived in the absence of transparency; and civil society as a potential anti-corruption force was subdued (Holmes, 2006, pp. 183-187). And as Kramer adds, due to the scarcity of goods and to the low trust to the government people believed that it is not wrong to steal from the state and this led to mass corruption and bribery (1977). Many people in post-communist countries believe that corruption in their countries was systemic during communist regime (Karklins, 2005). Bribing was not immoral; it was just a way of getting basic necessities to which people believed had a right. As the famous Czech saying illustrates: "Who does not steal from the state, steals from his own family". Another explanation for this boost of corruption during communism is the unclear distinction between public and private. Holmes (2006) calls this phenomenon institutional blurring characteristics of communist state. This means that the lack of clear boundaries between public and private creates confusion about what would count as stealing from society's property and what would be abuse of public office (Kostadinova, 2012). Interestingly, according to Rasma Karklin's analysis, "ordinary people" still understood corruption as morally wrong, but put the blame on "the system" for forcing them to take part in corruption (Karklins, 2005). As they are confident that vast majority of other people participate in corrupt practices, they as well participated in corrupt behaviour (Rothstein, 2007).

In communist regimes corruption was normal and widespread (Rose, Mishler, & Haerpfer, 1998); corruption was not abnormal but was the norm itself. In this case, the understanding of societal norms is crucial; therefore theories explaining norms are presented. Norms are defined as shared understanding about actions that are obligatory, permitted, or forbidden within society

(Ostrom, 2000). The social life is regulated by norms; therefore, individual's behaviour is more or less expected. Theories referencing to norms in the research of corruption are usually combining micro perspective and macro perspective; norms exist on the level of society, however, there are internalized by an individual, and individual behaviour reciprocally influences norms on the societal level (Cameron, Chaudhuri, Erkal, & Gangadharan, 2005; Fisman & Miguel, 2007; Kapoor & Ravi, 2012; Rose-Ackerman, 1999). Corruption is then behaviour of public officials, which deviates from the norms. The literature studying the relations between norms and corruption is inconclusive, some authors argue that social norms influence corruption (Fisman & Miguel, 2007; Rose-Ackerman, 1999), however, there are also results showing that the relations between corruption and norms are not that straightforward (Cameron et al., 2005; Kapoor & Ravi, 2012). Below are presented authors, which analyse the relations between norms and corruption in post-communist societies. Majority of them argue that norms concerning corruption are different than norms in countries, which have never experienced communist rule.

Criminology

First set of theories which can help us in connecting corruption to norms with the outcomes on the aggregate level is criminology and especially the Chicago School. It is argued that the social life is regulated by norms; therefore, an individual's behaviour is more or less expected. When a person does not act according to norms, he or she is sanctioned. In the case of corruption, we can say that the norm in established European democracies is not to be corrupt. If a person bribes, he or she is sanctioned not only by the law, but also by society. However, a different situation can occur in the case when the whole system is deviated, then everybody acts against the norms and nobody is being punished. The Chicago School named this phenomenon social disorganization. Social disorganization occurs when pathological behaviour includes everybody, not only deviant individuals, it is the deviation of the system. We can hypothesise that this happened in the case of post-communist countries, so many people started being corrupt, that corruption became the norm itself.

A similar logic of reasoning, however from a different point of view, offers 'bad apple theory'. People believe that it is the bad apples (individuals) in the barrel (society) that are rotten (corrupted), that only deviant individuals would act against the law. The flaw of this theory is that it is focusing only on the individual and his or her motivations. Why then would it be that in the post-communist countries there are more people who are corrupted than in the rest of Europe? Why there are consistently more bad apples? The alternative theory suggests that it is not the bad apples, but rather bad barrel that plays an important role in this problem. For example Zimbardo believes that good people can be turn into evil ones when being in a bad environment (2007). This could explain the different levels of corruption between post-communist states and the rest of Europe. Moreover, as many authors argue, corruption could be contagious (Klitgaard, 1988). When a person comes into contact with society with corrupted norms, he or she has a big risk of becoming corrupt him or herself, due to the fear of betraying the norms of the society and being sanctioned and on the other hand, when person from a corrupt system comes into country when corruption is deviation, he/she will quickly stop being corrupt (Mungiu-Pippidi & Dadasov, 2015).

Rational choice theory - game theory

Rational choice theory argues that every individual first weights the gains and costs and then acts in order to maximize the utility and minimize the costs. A public officer therefore decides whether the possibility of being caught is greater than the enjoyment of money he was offered, and acts accordingly. This theory was supported by Rose-Ackerman who argues that the reason for corruption is precisely the fact that public officials believe that expected advantages outweigh the expected costs (1978).

Game theory derives from the same line of thinking as the rational choice theory. Game theory looks at the decision making of an individual when collaborating with a different person. One of the most famous applications of the game theory is the Prisoner's dilemma. In the classic prisoner's dilemma situation, there are two prisoners and each of them goes through interrogation. If one betrays the other, he/she goes free, however, if both of them betray the other

one, they serve very long sentence in prison. But if none of them betray the other, they both serve short sentence. The variation of a prisoner's dilemma can be applied to the evolution of norms as well. In their article Bendor and Swistak define social norms as "behavioural rules that are backed by sanctions" (2001, p. 1494). If one violates social norm, he or she would be avoided or ostracised. There have to be sanctions from the third party so the norms would be stable. They present very interesting theory of the evolution of norms, which derives from the game theory. They argue that norms are developed through the repetitive game. When one person betrays the other one, the third party sanctions him or her. When this game is repeated enough times, the behaviour of not betraying becomes the norm. Better norms survive in the society while worse wither away. This understanding of norms can be used in the study of corruption; for a short term, or in countries where the system is not based on fairness, such as in autocracies or in communism as in our case, it is convenient to be corrupt. However, for the longer period of time or for countries, which are democratic and have the rule of law, it is more convenient to be honest. In communism, being corrupted could be rational and maybe even the best decision not only for the individual. Some social scientists even argue that corruption can be beneficial in some specific cases (Flatters & Macleod, 1995; Lui, 1985) such as in developing countries or authoritarian regimes. When the rule of law is lacking and public office in the country is not fair and does not guarantee equal access to services, corruption can substitute for this because it provides concrete benefits to groups, which would otherwise not have access to services (Karklins, 2005). As Huntington argues: "Corruption may thus be functional to the maintenance of a political system in a same way as reform is. Corruption itself may be substitute for reform and both corruption and reform may be substitutes for revolution" (Huntington, 1968). For example in developing countries corruption could be beneficial for all because it can help the economic system functioning more properly (Flatters & Macleod, 1995). This might have been true in communist countries at that time; due to scarcity of goods corruption was helping the economy. It became more rational to become corrupted and to bribe. One can say that the norms in post-communist countries might have changed under the communist rule. It became more rational to become corrupted and to bribe. New norms emerged and being corrupt was no more sanctioned, but on the other hand, in line with Huntington's reasoning, corruption might have played role in undermining the legitimacy of the political system.

Another theory connected to rational choice theory is the principal-agent model which can also

offer an interesting insight into the study of corruption (Aidt, 2003; Teorell, 2007). This theory is very frequently used in economics since the 1970s until today. The main idea is that one party (the principal) delegates work to another (agent) who performs this work (Eisenhardt, 1989). The problem arises when the principal and agent have different goals or when principal cannot successfully control what the agent is doing. Corruption is in this case understood as a criminal behaviour done by agents, who are entrusted to act on behalf of (honest) principal (Rothstein, 2011). There can be more types of agents and principals, for example the honest principal might be the state and corrupt agents might be the civil servants; or principal might be 'the people' and politicians might be the corrupt agents. In the case of corruption the principal has indeed different goals than agent, principal loses money or power when agent is corrupt. However, in communist countries, the principal does not have enough control of what the agent is doing for example in the case when principal is the people due to the simple reason that they cannot vote out corrupt politicians. Therefore in this case corruption can soar as nobody controls corrupt agents and they can continue in their behaviour without threat of being sanctioned.

2.3.1. Post-communism

In the decade following the fall of the iron curtain, corruption has been recognized as one of the most serious problems in post-communist countries (Kostadinova, 2012). Being corrupt became a norm during communism and it takes time to change norms. It was plausible to expect that after the fall of the iron curtain, thanks to emergence of democracy and the rule of law, new norms such as being fair, treat everybody equal, and integrity, would slowly start to emerge. Under communism it would be a deviance to not offer or accept a bribe, and as more and more people accept this deviance, it becomes a norm (Huntington, 1968). One can say that the norms in those countries might have changed under the communist rule. It became more rational to become corrupted and to bribe. With the communist takeover, new norms emerged and being corrupt was no more sanctioned, on the contrary, due to the scarcity of goods people believed that it is not wrong to steal from the state. As discussed above, many people in post-communist countries believe that corruption in their countries was systemic; however, even after transition to democracy the post-communist countries preserve their specific system of informal rules

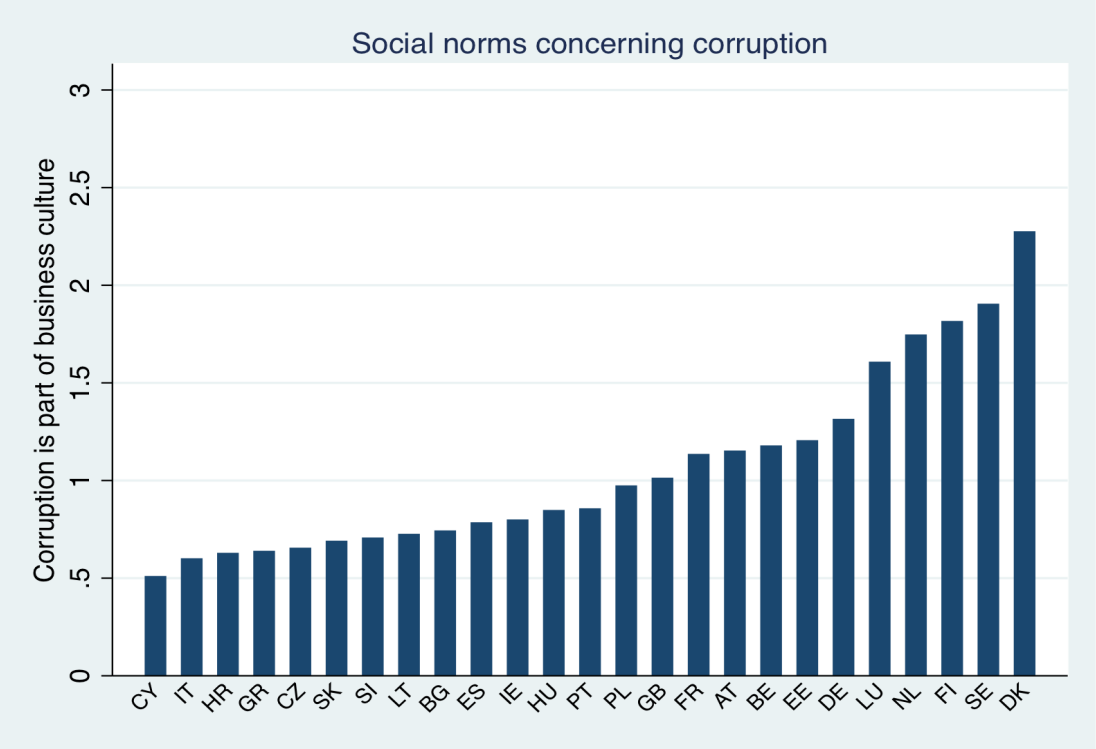
(Karklins, 2005), and as Rose et al. add: "changing regimes does not dispose of the problem but creates new opportunities for corruption" (Rose et al., 1998, p. 219). There is a paradox in post-communist countries: most people reject corruption, but many of them participate in corrupt activities. They are both victims and accomplices (Karklins, 2005, p. 6). Some authors even believe that the very nature of post-communism encourages corruption (Holmes, 1997). One of the explanations might be that state did not have legitimacy before the transition and this continues until today. State might still be seen as dishonest and untrustworthy which inhibits successful state reform (Kornai & Rose-Ackerman, 2004).

According to Miller et al., there are four hypotheses, which can explain the development of corruption after the transition to democracy (Miller, Grodeland, & Koshechkina, 2001). First is the "fading legacy" which argues that there will be gradual change of behaviour in line with the new historical experience and the old ways will be slowly fading away. Second one is the "escape from domination" which suggests that citizens suddenly after transition reject old ways of thinking. Third hypothesis is the most pessimistic; the "dead hand of history" suggests that the traditional ways of thinking will continue, and finally, hypothesis of "irrelevance of history" argues that current behaviour reflects only current conditions (Miller et al., 2001). It is rather difficult to find out which hypothesis is correct, however, research and data show that the development of corruption after the transition is not optimistic at all. Research and data show that in authoritarian regimes the level of corruption is higher than in democratic regimes, however, surprisingly, there are mixed results of the effect of democracy on the level of corruption concerning transition to democracy (Blake & Martin, 2006; Pellegata, 2012; Treisman, 2000). Brown (2011) presents the hypothesis that the effect of democracy on corruption is nonlinear and thus the results describing the effect of democratization on corruption are mixed. According to Pellegata's analysis, countries that are moving from non-democracy to democracy (hybrid mode) have the level of corruption higher in the beginning of the transformation than they had in non-democratic regime. Researchers suggest that the transition come hand in hand with distortion or even absence of the former rules, which brings more possibilities to corrupt activities. However, over time, the level of corruption should start slowly declining thanks to enforcing new rules and laws (Pellegata, 2012). This theory is supported by findings of Treisman, whose regression model shows that the current level of democracy does not have any effect on the level of corruption, but long exposure to democracy lowers corruption

(Treisman, 2000). In regard to these findings, one would expect that the level of corruption would peak in the years following the transition but would slowly decline in post-communist European countries, which are now for more than 25 years exposed to democracy. However, as discussed later in this dissertation, the average Control of Corruption in post-communist countries does not decline in time, quite on the contrary; there is a slight decrease in the Control of Corruption. According to Johnson (2005) democratization in Central Europe has not reduced corruption.

Moreover, even though almost half of century under communism is a long time to change the norms of the people and it could be expected that norms in the post-communist states might be different today, the current data show a different picture. To illustrate this problem we use data from the Eurobarometer 2013 (Figure 8).

Figure 8: Do you agree that corruption is part of business culture?



Source: Eurobarometer 2013. Corruption is part of business culture 0-totally agree, 1-tend to agree, 2-tend to disagree, 3-totally disagree

Figure 8 shows the public opinion on the question of whether corruption is part of a business culture in a country with the most recent data. The results are interestingly almost identical as those in the Table 2 by Mungiu-Pippidi, the division between post-communist countries and the rest of Europe is extremely sharp, with the exception of Estonia, Greece, Italy, and in the case of Eurobarometer's data also Cyprus. It seems that descriptive data support the pessimistic development of corruption after the transition.

There is therefore a question why democratization does not help in reducing corruption. One explanation might be that post-communist context and the increase in corruption in the years following the transition might undermine the perception on democracy and the purpose of public institutions (Karklins, 2005). It might be the case the highly corrupt courts and politicians might lead into the belief that democracy does not help with the fight against corruption, but rather the opposite, that it creates opportunities for corruption (Kornai & Rose-Ackerman, 2004) and this might lead to disillusion and continuation of corrupt behaviour.

Naturally, there exist significant differences among post-communist countries with countries in Central Europe doing much better than their eastern neighbours, and moreover, there are also crucial differences among different regions within post-communist countries (Kornai & Rose-Ackerman, 2004). Another question is the effect of the European Union on the development of corruption in post-communist countries. Some authors suggest that states, which became EU members in the first round of accession, are doing significantly better concerning the level of corruption than the rest of post-communist countries (Kornai & Rose-Ackerman, 2004). However, on the other hand, Holmes suggests that the accession to EU does not help most of the states with the battle against corruption (Holmes, 2006).

Based on theories explained above, the following five hypotheses are proposed. Each of them is divided into two hypotheses, one focused on Europe in general and the other on the specificities of post-communist countries.

H1: Control of Corruption will be higher in countries with lower income inequalities

H1a: In post-communist countries this relation will be weaker or non-existent

H2: Control of Corruption will be higher in countries with higher GDP per capita

H2a: In post-communist countries this relation will be stronger than in the rest of Europe

H3: Control of Corruption will be higher in countries with a higher share of Protestants

H3a: In post-communist countries this relation will be similar as in the rest of Europe

H4: Control of Corruption will be higher in countries with higher generalized trust

H4a: In post-communist countries this relation will be weaker

H5: Control of Corruption will be higher in countries with lower security values

H5a: In post-communist countries this relation will be similar as in the rest of Europe

3. METHODOLOGICAL PART - MEASURING CORRUPTION

There is an on-going academic debate on how to measure corruption and whether it is even possible to measure it. Corruption is a clandestine activity and there are no official statistics on the number of corruption cases. Unlike most other criminal activities, in the case of corruption, there is no motivation to report the cases to the police. Both the parties involved in corruption have an incentive to hide this activity (unlike theft, etc).

Due to the hidden nature of corruption there are no direct ways to measure it, nevertheless there are several indirect ways of getting information on the level of corruption in a country (Tanzi, 1998). Disadvantage of indirect measurement is that it is not clear whether these indirect measures are correct, whether they measure the real level of corruption or something else. Moreover, as discussed above, there are inconclusive opinions on the question whether it is even possible to compare corruption.

Measuring corruption have undergone a long process of evolution, today, we can talk about first, second, and third generation of indicators measuring corruption. The first generation includes composite indices, which are based primarily on expert opinions, which first appeared in the mid-90s of the 20th century. Composite indicators are until today the most widely used method of studying corruption, but they are heavily criticized from a methodological and theoretical point of view, such as wrong selection method or free-riding (in detail discussed below). In response to this criticism, some institutions began to publish opinion polls and surveys of companies where the respondents are surveyed on direct experience with corruption and their views on widespread corruption. Direct experience with bribes may seem as an objective method to detect the prevalence of corruption, but there are also major problems. Experience with corruption of citizens and among businesses shows only a small section of corruption. Moreover, corruption is a sensitive subject and respondents may lie or, in the case of corruption perception, respondents might be influenced by the peers or the media. Given that neither of these methods is able to reliably capture corruption, in recent years indicators called the third generation are appearing. These indicators do not aim to describe corruption in its whole range, but rather seek to find hard data in a specific area of corruption. The method is to capture a real level of corruption or a risk of corruption in a specific area with the help of already existing data.

Indicators of the third generation is a new method of measuring corruption, these indicators are thus so far limited to a certain area in a certain country and the possibility of international comparisons are still very limited (but first attempts have already appeared as discussed below). Table 4 shows the three generations of the most widely used measurement of corruption and example of that generation[2] and further characterizes advantages and disadvantages of each method. In the following chapters every option for corruption measuring is explored and analysed.

Table 4: Methods of measuring corruption

Generation	Example	Advantages	Disadvantages
First generation	Composite indices (TI, WB)	Oldest, highest number of countries	Unclear, non transparent methods, validity
Second generation	Public opinion polls (Eurobarometer, ESS, ISSP) - experience	Real experience with bribery	Respondents might lie, higher non-response, only measures bribery
	Public opinion polls (Eurobarometer, ESS, ISSP) - perception	Influence on policies, micro-analysis	Might measure public's content with polit. Or econ. situation
	Company surveys (BEEPS, Eurobarometer)	Relevant, objective, measure real experience	Only one area of corruption, respondents might lie
Third generation	IPI, Olken	"Hard data", measure real risk or level of corruption	So far only first attempts for international comparison

3.1. First generation - Composite indexes

The first indicators measuring corruption rather tried to open a discussion on the topic of corruption and to raise awareness about this problem than provide measures on the real level of

[2] This dissertation presents only the most used and well known indicators and indices measuring corruption on the European level, for an overview of wider selection of indicators on the world scale please see for example Malito (2014).

corruption (Heinrich & Hodess, 2011). These indicators have emerged in the mid-90s of the 20th century and include mostly composite indicators. As they were the first indicators measuring corruption, they are frequently called the first generation of measures (Graycar & Smith, 2011). The most well known composite indices are the Corruption Perception Index (CPI) from the Transparency International (TI) and the Control of Corruption (CC), which is part of the Worldwide Governance Indicators (WGI) published by the World Bank (WB). CPI by the Transparency International is older, dating back to 1995 whereas CC was launched in 1996.

Advantages and disadvantages

Composite indices are the most widely used indicators for the research of corruption nowadays (Fazekas, Toth, & King, 2013; Kapoor & Ravi, 2012; Treisman, 2000; 2007; Uslaner, 2009; Zakaria, 2013). They cover a broad selection of countries and years; they are conducted annually, which is much more often than any public opinion survey focusing on corruption. Moreover, as multiple sources are used, the measurement error of a single source is minimized (Charron et al., 2013). However, even though composite indices are widely used in corruption research, they also face a large critique. Some authors argue that corruption perceptions are far away from reality (Rose & Peiffer, 2012) and that composite indexes measure rather "folk stories" and stereotypes about corruption than real levels of corruption (Donchev & Ujhelyi, 2014; Treisman, 2007; 2013). Also, some authors believe that the WB indicator measures rather opinion of a business elite (Rohwer, 2009) and the CPI, on the other hand, only opinion of experts working at international institutions (Heywood, 1997). It is also highly unlikely that the composite indices measure grand corruption as nor the experts neither the public have direct experience with corruption on this level (Fazekas et al., 2013). Moreover, as some authors point out, the composite indices vary surprisingly little over time (Arndt & Oman, 2006; Kurtz & Schrank, 2007a; Mungiu-Pippidi, 2011), which might either suggest that there are too insensitive to change or that the perception of corruption does not change significantly in time. Additional crucial problems can be found in the sources for the composite indices. One of the most important sources is expert assessment. This data is based on the opinions of experts from several areas who are presumed to have deep knowledge of the situation in a particular country (Charron et al., 2013, p. 44). This type of data is published for example by the Freedom House or by the PRS group (International Country Risk Guide (ICRG)). Expert assessment might seem

like a valid method for measuring the level of corruption, however, there are potential problems. For example, the method is less transparent, because the exact methodology for assessing the level of perceived corruption is not publicly available (Mungiu-Pippidi & Dadasov, 2015). Moreover, experts usually have an idea of what the level of corruption in a particular country is, based on their knowledge of various other indicators, and they might "free-ride" on these data or on data from previous years (Charron et al., 2013, p. 44; Treisman, 2000). This could result in losing internal validity because sources for the composite indices might rely on the same source for the construction of their own measure (Malito, 2014). Moreover, composite indices use primarily non-representative sources; they might therefore be prone to biases, which might be augmented by the small sample size (Golden & Picci, 2005). Finally, another argument against composite indicators is that they rely on different number of sources and even on different sources most of the years; meaning that there might be low internal validity.

3.2. Second generation

In response to this criticism, some institutions began to publish opinion polls where the respondents are surveyed on direct experience with corruption and/or their views on prevalence of corruption – some authors include public opinion polls to second generation of indices[3]. Moreover, company polls are included into the second generation of indices where individuals in companies are surveyed on their experience and perception of corruption within their jobs.

3.2.1. Opinion Surveys

Today, there exists a large number of public opinion surveys covering the topic of corruption. Among the most well-known is European Social Survey (ESS), Eurobarometer, Global Corruption Barometer (GCB), International Social Survey Programme (ISSP), and World Values Survey (WVS). Public opinion surveys measure either perception of corruption or experience with bribery. An overview of the different surveys is available in Table 5.

[3] Some authors (e.g. Graycar & Smith (2011)) include also tools measuring specific parts of corruption into the second type of indicators such as Global Integrity Index or Open Budget Index.

Eurobarometer, GCB and ISSP include both these measures into one survey, and ESS and WVS have included only one type of measure in one year.

European Social Survey (ESS) surveys individuals every second year since 2002. Every round is focused on different topic, such as health, democracy, immigration, or others. In 2004, the ESS focused on economic morality, which included also two questions on direct experience with corruption - one question on active participation (respondent offered a bribe) and the second on passive participation (public official asked for bribe). In addition, ESS comprised question on corruption perception in round 5 (2010) where it was included under the module of 'Justice'. ESS does not conduct the survey as an organization, but member states organize surveys themselves following guidelines set by the ESS therefore the methodology should be similar in each country and the results comparable.

Eurobarometer is a cross-national longitudinal public opinion survey conducted since 1973 by the European Commission. It includes various topics and focuses on the member countries of the EU or on in special cases on the candidate countries (as for example in the case of Candidate Countries Eurobarometer conducted in 2001). The topic of corruption is not included in the Standard Eurobarometer, but was five times in the Special Eurobarometer (in 2005, 2007, 2009, 2011, 2013) where questions both on corruption perceptions and experience with corruption were included.

In addition to CPI, Transparency International also publishes the Global Corruption Barometer (GCB) since 2004 until today. GCB is a household survey focused solely on corruption and it poses many questions about corruption and bribery. For the purpose of this dissertation questions on the direct experience with corruption and on the perception of corruption, which are the most similar to other mentioned public opinion surveys, are chosen.

ISSP is another cross-national survey, which aligns the public opinion surveys in different countries so that the results are comparable across countries (such as the ESS). The programme was launched in 1985 and continues until today. New data are published on an annual basis and comprise of various topics. Questions concerning corruption were posed in the module "Role of Government IV" in 2006, and the very same questions are again included to the module "Role of Government 2016".

Finally, World Values Survey (WVS) is a cross-national longitudinal survey dating back to 1981. Until today there have been 6 waves analysing at most of 100 countries. WVS included question on corruption in their questionnaires only once, to the third wave of WVS (1995-1998), which makes it the oldest existing cross-national survey data on corruption perception in Europe.

Table 5: Second generation corruption measures

Name	Type of survey	Year	Countries
Eurobarometer	Company survey	2014, 2015	EU+NO, LI, CH
WB BEEPS	Company survey	1999, 2002, 2005, 2009, 2011-2014	Eastern Europe and Central Asia (29 countries in 2013)
ESS	Public opinion poll	2004, 2010	25 European countries + TR
ISSP	Public opinion poll	2006, 2016	30 countries (19 European countries in 2006)
Eurobarometer	Public opinion poll	2005, 2007, 2009, 2011, 2013	EU+NO, LI, CH
GCB	Public opinion poll	2003, 2004, 2005, 2006, 2007, 2009, 2010/11, 2013	107 countries in 2013 in total, 30 European
WVS	Public opinion poll	1996-1998	53 countries in total, 27 European

Source: WVS, GCB, Eurobarometer, ESS, WB, ISSP

Advantages and critique

As mentioned above, public opinion surveys measure either direct experience with corruption, or corruption perceptions. Measuring corruption perceptions might be a questionable method, as it is not clear whether the public can know the real levels of corruption in a country. People's opinion on this subject could be influenced for example by peers (Lambsdorff, 2001), by current dissatisfaction with political or economic situation (Mungiu-Pippidi, 2015b) or by the media coverage of corruption cases. Free press in democracies reports widely about corruption, whereas in autocratic regimes, the public can rarely learn about corruption cases due to the censorship. And as Karklins adds: "this can mislead people to believe that democracies are more corrupt, causing support for authoritarians or even nostalgia for a previous dictatorship, as has happened among some segments of post-communist society" (2005, p. 7). However, even though there are obvious drawbacks in measuring the perception of corruption, there are certain advantages as

well. Public opinion polls have higher chance of avoiding the problem with "free-riding", common public does not have the same information as experts thus they are more likely to fill the survey free of any assumptions. Another advantage of public opinion polls over composite indices is that it is possible to do a research not only on the macro results but it is also possible to do microanalysis. Opinion polls are highly correlated across time and cross-nationally which reflects a certain degree of reliability (Treisman, 2000), and finally, the subjective evaluation of corruption seem to influence government decisions and the political behaviour of citizens as well (Mauro, 1995).

Another type of public opinion poll is focused on the experience with bribery. A considerable advantage of experience-based measures is that they are focused on the people who actually are in contact with public authorities and they measure real experience with bribery, not just perceptions. However, as in the case of perception based measures, there are also several disadvantages and downfalls of experience-based measure. First, it is rather difficult (rather close to impossible) to obtain data on experience with corruption on all levels. Public opinion surveys measure most of the time only corruption on the lowest level – petty corruption. Also, there is a threat, especially in the case when the pollster is asking about the active participation in bribery, that the respondents might lie because they might be afraid of being judged, the results might be therefore biased.

3.2.2. Company and business surveys

Company surveys might seem like a valid option for measuring corruption, because companies can encounter corruption not only in the form of petty bribery, but also at the higher levels, such as state, they can therefore catch wider scope of corruption than public opinion surveys. On the other hand, company surveys also have certain disadvantages. One enormous problem is that companies have probably higher incentive to lie about corruption; it would be implausible to expect that companies would be willing to admit to bribery. Another problem is that the scope is limited only to bribery, and, as one can see for example in Eurobarometer survey (Figure 10), only limited number of companies have had the possibility to offer a bribe, the sample size is

therefore very small and representativeness non-existent. Even though the company surveys are probably not very valid, they might show us at least trends in company bribery.

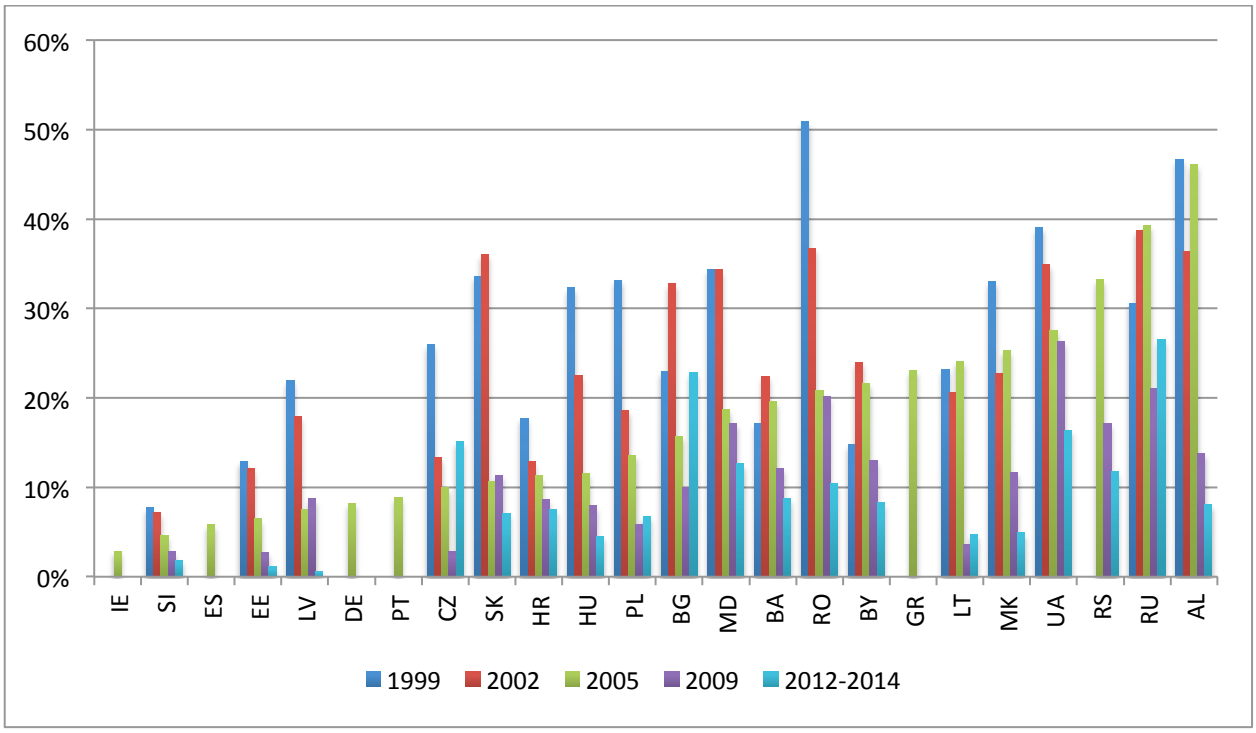
BEEPS

The Business Environment and Enterprise Performance Survey (BEEPS) is a survey conducted by the World Bank and the European Bank for Reconstruction and Development (EBRD). It focuses only on Eastern European countries and the region of Central Asia[4] and it aims to analyse the business environment. BEEPS was conducted in 1999, 2002, 2005, 2009, and in 2012-2014 and it includes companies selected by sampling method with at least 5 full-time employees. The number of companies interviewed is growing by the years; in 1999 it was 4000 enterprises in 25 countries, in 2009 round they interviewed almost 12000 enterprises in 29 countries (EBRD, 2010), and finally, in 2011-2014 they included 16 000 enterprises in 30 countries of eastern Europe and Central Asia (EBRD, 2015). BEEPS survey is organized as a panel study, most companies are therefore included several times and it is possible to follow the development of the company in time. The panel has unfortunately some limitations; For example, in 1999 the EBRD has not kept information about the surveyed companies, the possibility of a panel of comparison is therefore not possible until 2002. Figure 9 shows an answer in percentage which was posed the executives of the surveyed companies: "How often is the following statement true: It is common for companies in my line of business to have to pay some irregular "additional payments/gifts" to get things done" (EBRD, 2006). It is obvious that in almost all European countries the share of executives who agree that it is common to give bribes is decreasing over time and the latest BEEPS shows very positive results. The average share of executives, who agreed that it is necessary to give bribes, decreased from 28 % in 1999 to only 9 % in 2012-2014. Unfortunately, as discussed above, data exists only for Eastern Europe and Central Asia (with small exceptions); it is therefore impossible to compare the results with the Western Europe in time. An interesting point is that BEEPS data show great variation on time, the correlation between 1999 BEEPS and 2012-2014 BEEPS is only 0.28 (non-significant).

[4] BEEPS 2005 included also several countries from western and southern Europe as reference countries (Germany, Ireland, Greece, Spain, and Portugal)

When we comparing correlations between CPI (TI) or CC (WB), the correlations on same years and countries is 0.78 and 0.86 respectively[5].

Figure 9: BEEPS 1999-2014



Source: BEEPS. Only European countries are included. Percentage of company executives who said it was always, usually, of frequently true that companies in their line of business had to pay some irregular "additional payments/gifts" to get things done

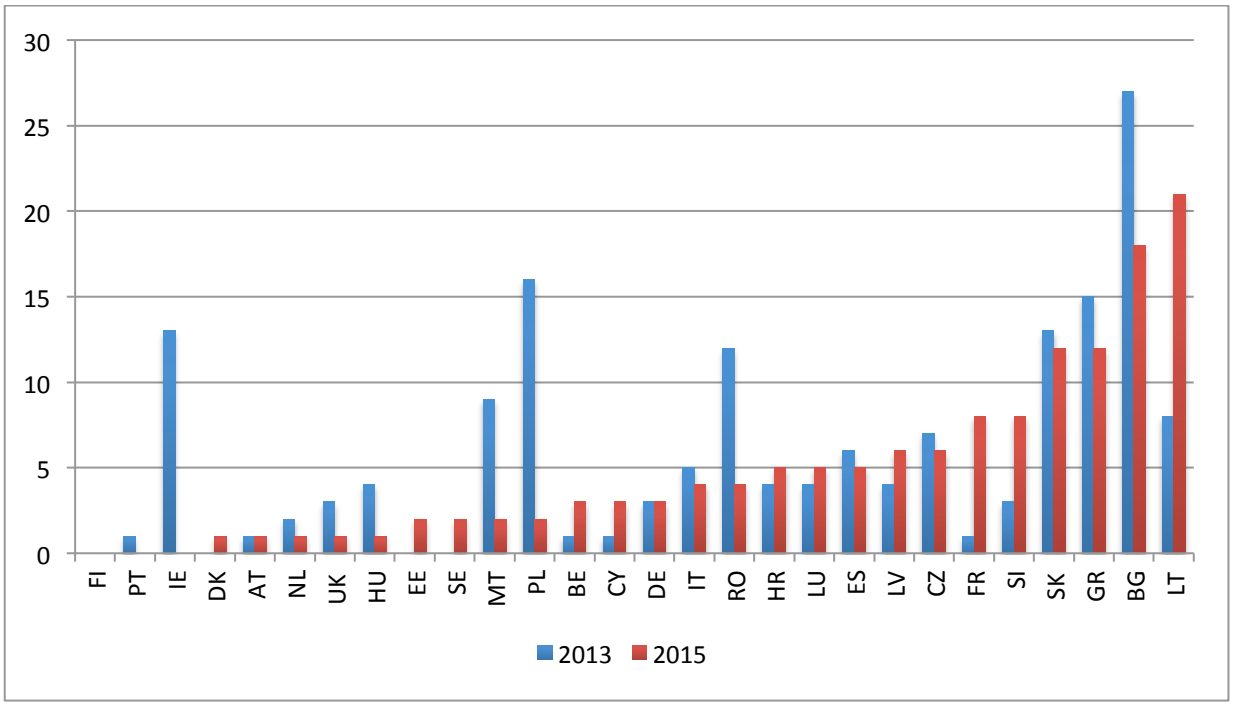
Eurobarometer

Eurobarometer is a cross-national longitudinal public opinion survey conducted since 1973 by the European Commission. It includes various topics and focuses on the member countries of the EU or on the candidate countries (as for example in the case of Candidate Countries Eurobarometer conducted in 2001). In addition to public opinion polls, Eurobarometer also

[5] CC was not published in 1999, I therefore used average from 1998-2000. For 2012-2014 I used year 2013.

conducted two times company surveys as part of so-called Flash Eurobarometer[6], Eurobarometer specifically asked businesses about the direct experience with bribery in 2013 and then again in 2015. Figure 10 shows the results of this survey in European countries. Results are ordered by their average scores in 2015 in response to the question whether from the company's somebody expecting a bribe in the following areas: in order to obtain building permits, business permits, changes in land use, environmental permits, including waste and wastewater treatment, license plate or permit in vehicles, and the state social assistance and structural funds.

Figure 10: Flash Eurobarometer



Source: Flash Eurobarometer, 2013, 2015. Data include executives who have been in contact with Building permits, Business permits, Change of land use, Environmental permits including waste and water treatment, Licence plates or permits related to vehicles, State and social aid and Structural funds

[6] Flash Eurobarometer is a quick phone survey conducted on a specific topic on the request of any part of the European Commission. For more information please see http://ec.europa.eu/public_opinion/archives/flash_arch_en.htm

Unfortunately, first look at the graph unveils certain inconsistencies. Eurobarometer included only executives who have been in contact with public officials only in a selection of sectors. Such narrow selection filtered out most of the businesses, for example in 2015, only 43 % of all companies had this type of contact, therefore in the analysis of the direct experience with corruption only 3365 companies remained. This resulted with very low numbers of companies in each country making the data extremely inappropriate for country level analysis. This problem is clearly visible from Figure 10, which has a very high variation in several countries. For example in 2013 in Ireland 13 % of executives admitted that someone expected from them a bribe in the last 12 months (in real numbers this is 7 respondents), however, interestingly, this number is zero in 2015. For this reason Eurobarometer 2013 and 2015 will not be used in the correlation analysis in the following chapters.

3.3. Third generation

First and second generation of indicators measuring corruption focused mainly on international comparisons, but a deeper analysis within the country or even within a single sector is much more difficult and with the use of the first generation of indicators even impossible. Moreover, there is also the problem that the indicators of the first and second generation are based on the views of either the experts or the citizens or company managers and are not based on hard data, so no one can assess whether these indicators measure the actual level of corruption, or views that may be far from reliable.

Within each state, therefore, various other indicators for measurement of either corruption or corruption risks by using hard data began to be formed. These indicators have often been created using the results of the second generation of indicators that pointed to problems in certain sectors of public administration and the problems began to be deeply analysed using other data (Graycar & Smith, 2011).

As already mentioned in the introduction, corruption cannot be measured directly, but there are various indirect ways to obtain data on the level of corruption in the country. Usually, for these purposes big data are used in certain sectors, not at the state level. Due to the fact, that these

methods of measuring corruption are a relatively new method for corruption measurement and usually only on the level of one country, it is not yet certain whether they are reliable and suitable for comparing multiple countries (even though there is already an attempt for comparison (Mungiu-Pippidi, 2015a)). Due to this reason, that there are many approaches and many methods for measuring corruption within certain sectors, this third generation of indicators is very difficult to be described in a coherent manner. One attempt to describe these indicators was done by Heinrich and Hodess (2011), who argue that the indicators of third generation have some common features, such as that the state owns the data (state data are used to produce indicators unlike independent institutions or research agencies as in the previous two generations of indicators). Another common feature is data triangulation (in addition to "hard data", third generation indicators focus also on the interviews with public officials or on the analysis of how well the institutions work). Finally, common outcome is emphasis on the application of the results to improve government institutions, as opposed to simply presenting the results, as in the case of indicators of the first or second generation. Moreover, Fazekas (2013) tried to summarize most influential research focusing on third generation indicators, his findings can be seen in Table 6. To the indicators of the third generation we can include for example research by Golden & Picci from 2005, who observed the difference between the existing infrastructure and the money allocated for infrastructure construction in Italy (Golden & Picci, 2005). Similar approach was chosen by Olken in Indonesia (2009). Olken (2009) focused in his research on the difference between the real level of corruption and the perception of corruption. He chose rural Indonesia for his research, where he used multiple methods to determine the real cost of road construction (amount of materials used for construction, the price of materials and salaries), from this real price he subtracted the price the village paid for the construction of roads. He called the difference between these prices "lost expenses."

Table 6: Summary of selected studies using objective indicators

Table 1. Summary of selected studies using objective indicators of corruption

paper	indicator used	Country	year	sector	potential for international comparison	part of CRI*
(Auriol et al., 2011)	Exceptional procedure type	Paraguay	2004-2007	general procurement	HIGH If procedure definitions can be aligned, international comparisons can be made widely	Yes
(Bandiera, Prat, & Valletti, 2009)	Price differentials for standard goods purchased locally or through a national procurement agency	Italy	2000-2005	various standardized goods (e.g. paper)	LOW Price data is not readily available in most countries, many countries don't have national procurement agencies, national procurement agencies are likely to be captured in many countries.	No
(Coviello & Gagliarducci, 2010)	Number of bidders Same firm awarded contracts recurrently Level of competition	Italy	2000-2005	general procurement	HIGH Number of bidders, recurrent contract award, and competitiveness of bids are available in many countries.	Yes
(Di Tella & Schargrodsky, 2003)	Difference in prices of standardized products such as ethyl alcohol	Brazil	1996-1997	health care	MEDIUM Detailed product-level price and quantity information is not readily available across many countries, but can be collected.	No
(Ferraz & Finan, 2008)	Corruption uncovered by federal audits of local government finances	Brazil	2003	federal-local transfers	LOW high quality audits, not influenced by powerful corrupt groups are unlikely to be available in many countries.	No
(Golden & Picci, 2005)	Ratio of physical stock of infrastructure to cumulative spending on infrastructure	Italy	1997	infrastructure	MEDIUM It is hard to compute comparable value of the stock of physical capital across countries different in the quality of infrastructure and geography.	No
(Goldman et al., 2013)	Political office holders' position on company boards	USA	1990-2004	general procurement	HIGH Company contract volumes can be estimated in many countries and publicly listed companies political connections can be traced relatively easily.	No**
(Hyytinen et al., 2008)	Number and type of invited firms Use of restricted procedure	Sweden	1990-1998	cleaning services	HIGH Both number of bidders and procedure types are readily available in many countries.	Yes
(Olken, 2006)	Difference between the quantity of in-kind benefits (rice) received according to official records and reported survey evidence	Indonesia	1998-1999	welfare spending	MEDIUM It is possible to design user surveys across a wide range of countries to track actual receipts, although it may be expensive.	No
(Olken, 2007)	Differences between the officially reported and independently audited prices and quantities of road construction projects	Indonesia	2003-2004	infrastructure (roads)	LOW Auditing large numbers of projects by independent engineers is costly and unlikely to allow for cross-country comparisons.	No
(Reinikka & Svensson, 2004)	Difference between block grants received by schools according to official records and user survey	Uganda	1991-1995	education	MEDIUM It is possible to design user surveys across a wide range of countries to track actual receipts, although it may be expensive.	No

*CRI=Corruption Risk Index, developed in this paper; **This approach is utilized in (Fazekas, Tóth, & King, 2013a).

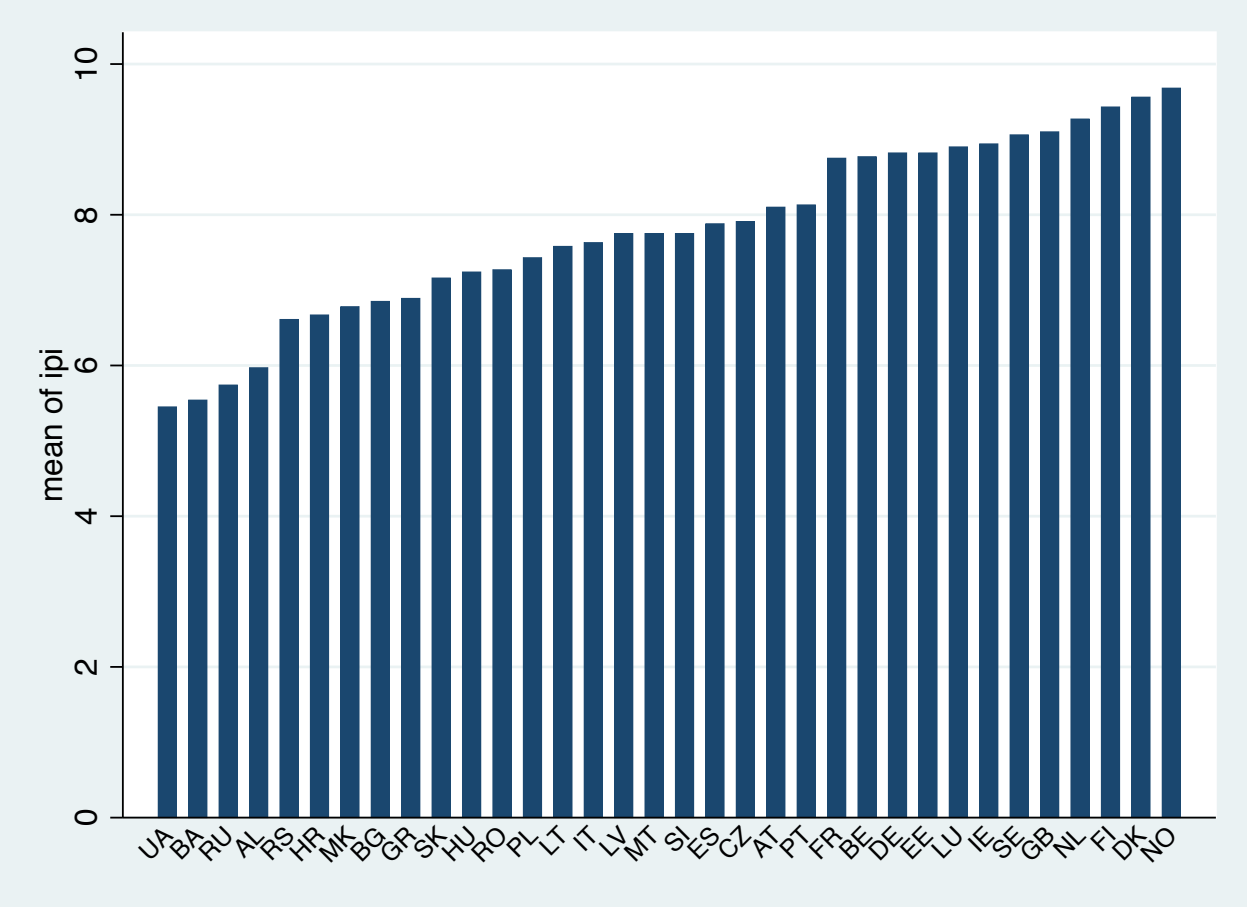
Source: (Fazekas et al., 2013)

Subsequently, he conducted a public opinion survey among the villagers and asked them about the likelihood of corruption in the construction of roads. The results showed that the villagers have some relatively good idea of the corruption in road building, but this perception was not accurate enough to be able to replace the lost variable expenses, which was based on hard data. Olken's article concludes with the opinion that the perception of corruption should be used to analyse the determinants of corruption only with great caution (2009). Of course, Olken's research cannot be generalized to establish he difference between the real corruption and the perception of corruption, but it shows that there may be a major problem with understanding corruption perception as the real level of corruption, which is implied by many authors investigating corruption (Blake & Martin, 2006; Mauro, 1995; Pellegata, 2012; Treisman, 2000). Another example of third generation indicator is paper by Amore and Bennedsen (2013), who investigated the degree of nepotism in Denmark on the basis of kinship connections between politics and business owners, or Goldman et al., pursuing politically connected companies that won public procurement contracts (2013). Research using data corruption from public procurement has appeared in a research by more authors (Coviello & Gagliarducci, 2010; Fazekas et al., 2013). It might be possible to compare some of these indicators across countries, and there are scientific teams working on an international comparison (Fazekas et al., 2013; Mungiu-Pippidi & Dadasov, 2015). For example, Alina Mungiu-Pippidi and her team have produced an indicator called the Index of Public Integrity, which evaluates states using different, mostly hard data (the independence of the judiciary, Transparency in government spending, Trade openness, Freedom of the press, Administrative burden, and e-government), this indicator does not measure corruption per se, but rather the risk of corruption in those states (Mungiu-Pippidi & Dadasov, 2015). Despite the fact that this indicator is included among the indicators of the third generation, this indicator does not use exclusively 'hard data', it is therefore only a step closer to the indicators, which use only hard data. For example, the very first component, judicial independence is not based on objective data, but on survey of the perceptions of the independence of the judiciary among managers (Executive Opinion Survey), which is carried out annually by the World Economic Forum.

Trade openness combines data of number of documents that are needed for export and import and about the time that is necessary for completing export or import. Administrative burden consists of a number of procedures that are necessary to establish business, the time that is spent

on this, how many times a year it is necessary to pay taxes, and how much time it takes to pay taxes. E-government is based on the use of the Internet, namely the percentage of the population that has a connection to the Internet, on the proportion of Internet users and, finally, on the proportion of Facebook users. Transparency of the budget is based on specific data about the transparency of individual budget items. Finally, freedom of the press is obtained from Freedom House, in addition to objective data it is also based on the opinions of experts in this field. From the description of the index IPI it can be seen that the third generation of indicators that are comparing corruption at the international level are only at the beginning of development. IPI may well be included among the indicators of the third generation, but detailed descriptions of the indicators showed that IPI is still on the edge of the third generation, since resources are not only objective data, but also partly the opinions of experts.

Figure 11: Index of public integrity



Source: IPI. Indicator goes from 0-10 with 10 meaning the best public integrity.

Figure 11 shows the results of IPI for 2016. It seems that there is no country which would have unexpected results in this indicator. Scandinavian countries have the best results and on the other hand Ukraine, Belarus, or Russia are doing poorly.

3.4. Assessing the best indicators

The nature of corruption does not allow us to make definitive conclusions about the validity and reliability of measures of corruption as all the indicators measure corruption indirectly. However, we can assess the quality of measures indirectly and we can focus on the different possible uses of these measures. In the following part it will be ascertained which criteria can be used to indirectly assess which indicators are the best for the corruption analysis in Europe.

First, the indicators and surveys will be analysed from the qualitative point of view; for this there are several criteria. One of the most important criteria is the quality of methods used for the different indicators. The indicators will be assessed on the basis of transparency, quality and consistency of methods. It will also look at how transparent these methods are, whether the methods were regularly changed over time, and finally, whether the data and methods can be freely downloaded. Next criterion is coverage, consisting of country and time coverage. Country coverage is important for researchers focusing on comparative cross-national research but also for case studies, as there is higher probability of specific country to be included. Higher number of countries included into the survey or indicator offers higher usability and therefore more possibilities for analyses. Similar indicator is time coverage, which is crucial for researchers analysing development in time within country, region, or across countries. There are also further issues connected to the analysis in time. One of the most important factors is the consistency of the questionnaire and methods in the case of public opinion surveys and consistency of methods in the case of composite indices. Another important criterion of usability (concerning only public opinion surveys) is whether it is possible to use the survey for additional microanalysis.

Secondly, the dissertation analyses the relations within the first and second generation of measures using quantitative analysis – pairwise correlations. Correlation analysis within indicators conducted in the same year might show potential problems with a particular indicator.

For example low correlations with one particular survey might suggest potential problem with using this survey in an analysis. On the other hand, the results do not show definitely whether there is a problem or not with the specific survey or indicator, because we cannot ascertain which indicator is correct as we have no way of knowing the real level of corruption in a country. Theoretically, the indicator correlated weakly with the rest of indicators might be the one closest to reality. Unfortunately, there is no way of proving this with the data we have today. However, hopefully, there is higher probability that in this scenario, surveys, which are correlated strongly with each other, would be closer to the real levels of what we want to measure. To make this assumption more valid, correlations between the first and second generation of indicators will be included, as this might demonstrate certain reliability. Moreover, irregularities within the data and correlation results will be observed to spot any problems.

Table 7 shows the main advantages and disadvantages of composite indices and public opinion surveys, it is clear that composite indices have biggest advantage in their time and country coverage, and public opinion surveys, on the other hand, in their clear methodology, representativity and possibility of microanalysis.

Table 7: Methods of measuring corruption

Example	Advantages	Disadvantages
Composite indices (TI, WB)	Oldest, highest number of countries	Unclear, non -ransparent methods, validity
Public opinion polls (Eurobarometer, ESS, GCB, ISSP) - experience	Real experience with bribery, micro analysis	Respondents might lie, higher non-response, only measures bribery
Public opinion polls (Eurobarometer, ESS, GCB, ISSP, WVS) - perceptions	No free-riding problem, micro analysis	Respondents might be influenced by the media or peers

3.4.1. Qualitative assessment

3.4.1.1. Methods and transparency

First generation

Composite indices consist of multiple sources, which evaluate the level of corruption; it could be a public opinion survey, expert assessment, company surveys and others. These different sources are put together, weighted, and one score for each country is calculated. The methodology of the CC is similar to the one of the CPI, however there are several differences. As there is an extensive literature on the methodological differences between these two composite indices, only the most substantive dissimilarities[7] are highlighted in this dissertation. Firstly, WB uses more sources than TI, for example in 2014 TI used 12 sources (Transparency International, 2014) and the WB used 31 (out of them 11 sources identical as the TI) (World Bank, n.d.). Then, data sources of the CPI are only based on expert's perceptions of corruption, whereas CC also relies on representative public opinion polls. Moreover, there are differences in the weighting; CPI gives an equal weight to each of the sources, CC weights sources differently. Finally, WB computes standard errors for each country, whereas CPI does not provide this information, CPI only provides confidence intervals of countries based on the sources. Moreover, TI changed their methodology in 2012 after an internal and external review process (Transparency International, 2012a), they mainly tackled the problems with using one data source for more years and started to rank countries independently. The method is now replicated each year. However, the exact methodology and data from sources are not publicly available, which is a major problem with CPI and with CC. Moreover, TI allows users to download data in excel file only since 2010, the data from 1995-2009 are available only in PDF or online, they must be therefore scraped. CC is more advanced in their usability as their data are available online and downloadable in one concise excel file.

[7] For the exact methodology of the CC please see Kaufmann et al. (2004) and for the methodology of CPI see Lambsdorff (2007). For more in depth literature on the differences between the methodology of CPI and CC please see Malito (2014), Rohwer (2009) or Knack (2006).

Second generation

All public opinion surveys included in this dissertation are representative large cross-national surveys with thousands of respondents. The methodology of public opinion polling is well established; there are therefore only slight differences. All the surveys use random sampling, face-to-face interview and have more than 1,000 respondents from each country. GCB is a household survey whereas the rest of surveys are conducted on individual respondents.

Even though methodology is similar, differences can be found in the questionnaires. In addition to different definitions of corruption, as discussed above, the target population is also different. Some surveys investigate the individual experience with corruption (ESS, Eurobarometer) and other rather experience of both the respondent and member of his/her family (ISSP) or household (GCB), which could result in seemingly higher prevalence of corruption and lowers the possibility of comparison as family or household can be defined differently in different countries. Also, some surveys ask about experience in last 12 months (Eurobarometer, GCB), and others ask about experience in the last five years (ESS, ISSP), which also might make the comparison of different survey results less valid. Finally, some surveys do not take into account the possibility that the respondent have not been in contact with any public office thus possibly making the results on experience with corruption biased. For example ESS gives the possibility to answer 'no experience' whereas ISSP does not give this option. GCB started to ask on the possible contact in 2006 and Eurobarometer in 2013.

Transparency is in the case of public opinion polls much better than in composite indices; most of are easily downloadable and are free.

Third generation

IPI is very open with the data sources and methodology. All data are easily downloadable in excel which enables easy data analysis. Moreover, methods are openly and transparently described. However, the transformation of the scale from the raw data into the component used in analysis in not clearly explained and sometime weight had to be used also without specific explanation.

3.4.1.2. Country and time coverage

First generation

Table 8 shows CC's and CPI's country and time coverage. CPI was launched a year earlier (in 1995) and has been published annually in the earlier years; it has therefore larger time coverage. WB on the other hand covers larger number of European countries in the earlier years but was published only every second year until 2002. However, since 2007 both the indicators cover all 40 countries analysed in this dissertation and are published annually.

Table 8: Number of countries included in CPI and CC

Year	CPI	CC
1995	18	
1996	20	39
1997	22	
1998	29	39
1999	35	
2000	33	39
2001	32	
2002	34	39
2003	38	40
2004	39	40
2005	39	40
2006	39	40
2007	40	40
2008	40	40
2009	40	40
2010	40	40
2011	40	40
2012	40	40
2013	40	40
2014	40	40

Source: WB, TI

Second generation

Unfortunately, public opinion surveys focusing on corruption conducted on a regular basis emerged only quite recently. However, the oldest existing public opinion survey focusing on corruption perception is WVS from 1996-1998, and the oldest experience-based measure is from 2003 (GCB).

Table 9: Time and country coverage

	ESS	Eurobarometer	GCB	ISSP	WVS
1996-1998					27 (P)
2004	25 (E)		30 (E+P)		
2005		25 (E+P)	28 (E+P)		
2006			27 (E+P)	19 (E+P)	
2007		27 (E+P)	29 (E+P)		
2008			27 (E+P)		
2009		27 (E+P)	31 (E+P)		
2010	27 (P)				
2011		27 (E+P)			
2012					
2013		28 (E+P)	30 (E+P)		
2016			32 (E+P)	? (E+P)	

Source: ESS, Eurobarometer, GCB, ISSP, and WVS. Only European countries are included. E=corruption experience, P=corruption perception.

Table 9 shows, which survey included which countries and when, it also shows whether the surveys were focused on corruption perception, on experience with bribery, or on both of corruption measures. WVS included only question on perception of corruption and only once, therefore time coverage is very low. On the other hand, out of 40 European countries analysed in this paper 27 were included in the WVS, which is a very high number for such an early study. ESS comprised questions on experience with corruption in 2004 and on corruption perception in 2010. In 2004, 25 European countries were included into the survey, and in 2010, the number of countries increased to 27. Eurobarometer conducted surveys on corruption in 2005, 2007, 2009, 2011, and 2013. Eurobarometer includes only member states of the European Union and succession countries; 25 countries were involved in Eurobarometer 2005, 27 in Eurobarometer 2007, 2009 and 2011, and finally, 28 in Eurobarometer 2013. The advantage is that in all the

rounds of Eurobarometer, the same countries are included; it is therefore possible to observe development of corruption in these countries. As table 3 shows, GCB was conducted most often (8 times) compared to other public opinion surveys and has also the biggest coverage of countries. On the other hand, the countries are not the same in all rounds of GCB; therefore the country coverage for development in time is in reality lower. ISSP has so far only results from the 2006, when it included only 19 countries, which is the least of all surveys. ISSP is conducted also in 2016, however, the country coverage is not known yet.

Third generation

As discusses, unfortunately, there is no time coverage of the IPI as it is a brand new indicator. On the other hand, country coverage is very good, covering 105 world countries and among them 37 of European countries.

3.4.1.3. Analysis in time

First generation

A very important question for many of the researchers is whether the indicators can be used in analysis over time. This is also the point where many researchers are making errors, analysing development in time when it is not plausible.

Comparing CPI in time is rather problematic due to the fact that the TI has sometimes reused the same surveys in successive years (Treisman, 2007) and that they ranked countries relative to each other, rather than score each country independently. As discussed above, TI changed their methodology in 2012, it is therefore crucial to keep in mind that he results prior to 2012 are not comparable in time. TI themselves emphasize that comparison in time is not possible (Transparency International, 2012b).

On the other hand, the World Bank uses the same methodology since 1996; it is therefore possible (with caution) to compare results in time (Kaufmann, Mastruzzi, & Kraay, 2010).

However, as discussed above, both composite indicators have changed occasionally the sources of their indices, so the changes in corruption might be due to inclusion of data from new organizations rather than to a change of real corruption perceptions. Moreover, as Kaufmann et al. suggest, about half of the variance of changes over time in CC are due to the changes in weights assigned by the aggregation procedure and from the changes of sources (2002).

Second generation

From the point of analysis in time, WVS is unfortunately out of the question as it has been conducted only once. Neither ESS can be used for analysis in time due to different scope of questions (perceptions vs. experience). ISSP is a very good candidate as it allows for broader analysis of context of corruption within and among countries over 10 years. ISSP included questions on corruption in 2006 and then again in 2016, and the questions are worded exactly the same; it is therefore possible to analyse development in countries over ten years period. There are 19 European countries, which took part in ISSP 2006, the final number of countries participating in 2016 is still not known. However, time analysis would be possible only on maximum of 19 countries.

Eurobarometer changed significantly the wordings in the questions concerning the experience with corruption and corruption perception in 2013. Corruption perception question offers different possibilities in a battery than in earlier waves therefore the possibility of time analysis is more difficult. In the question about experience Eurobarometer 2013 asks for the first time whether respondents have had any contact with the institutions filtering respondents with no contact, therefore making the comparison in time also problematic. Therefore the results are comparable only until 2013 and the last survey cannot be used.

GCB seems to be a suitable survey for time analysis but there are several problems. GCB country coverage varies from year to year, and unlike Eurobarometer, GCB does not include the very same countries in all years. Moreover, the GCB has changed the wordings of questions very frequently and in 2006, they started filtering out people who have not been in contact with any of the institutions therefore the data are not straightforwardly comparable in time.

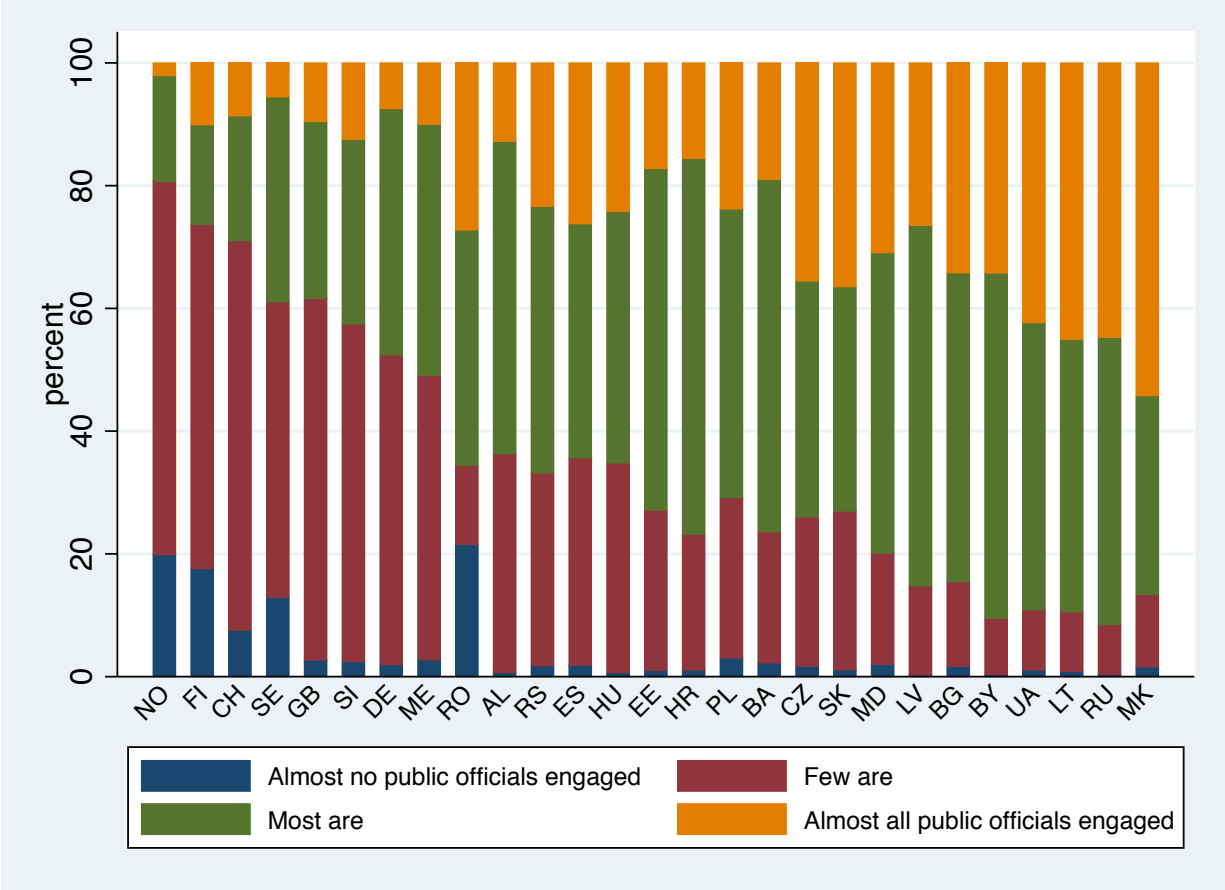
Third generation

As mentioned above, there is so far only one time point, but if there will not be changes in methodology, comparison in time would be possible.

3.4.1.4. Possibilities of microanalysis

GCB and Eurobarometer have an advantage of having included high number of countries and being conducted for a number of times. GCB's questionnaire on corruption is very detailed and thorough therefore offers grounds for a very thorough analysis of corruption. For example, it is possible to compare the incidence of bribery and perceptions in the very same area. On the other hand, GCB includes only questions on corruption and bribery and demographic data (gender, age, education, income) therefore it not suitable for analysing broader contexts of corruption. Eurobarometer has also very detailed questionnaire on corruption and in addition, it includes more questions. However, the scope is different in each wave, for example in 2005 it is science, health or languages, in 2007 it is environment and justice and so on. On the other hand, Eurobarometer offers more options on the demographic data, such as marital status or occupation so there are more possibilities for a statistical analysis than in the case of GCB. WVS, ESS and ISSP include large number of other topics in their surveys; therefore there are larger possibilities of analysing broader context of corruption, for example political attitudes and their influence on corruption. ESS includes more countries than ISSP however, ISSP has a great advantage of including the topic of corruption twice in their survey therefore it can be studied the development of corruption in ten years (2006-2016). Moreover, ISSP included both perception of corruption and personal experience of corruption into one survey, therefore the connections between these two areas of corruption can be analysed. Finally, even though WVS is a large survey including lots of areas, which could be interesting in studying corruption, and it is also the oldest public opinion survey on corruption perception, there exist serious doubts about using this survey in analysis of corruption, which can be easily visible from Figure 12.

Figure 12: How widespread do you think bribe taking and corruption is in this country?



Source: WVS, wave 3 (1995-1998)

Figure 12 shows a very curious case - Romania, where 20 % of respondents believe that almost no public officials are engaged in corruption. These results are rather unexpected because in all surveys in following years Romania is grouped mostly with other post-communist countries with respondents believing there is very big prevalence of corruption. The explanation might be radical change in respondents' perceptions or simply a mistake in data. However, this poses doubts on the validity of results and would not be recommended on further usage. Therefore, from the point of view of the possibilities of broader analysis, ISSP or ESS are probably much better surveys.

Qualitative assessment

Table 10 shows concisely the outcomes of the qualitative assessment. It can be seen that each survey and composite indicator has different advantages and disadvantages and should be used for different type of analysis.

Table 10: Comparison of public opinion surveys and composite indices

Indicator	Consistency of methods and questionnaire	Country coverage (Average nb of countries)	Time coverage (nb of years)	Micro analysis	Comparable in time?
ESS	YES	26	2	YES	NO
Eurobarometer	Partly (except 2013)	27	5	Partly	Partly (except 2013)
GCB	Mostly NO	29	8	Partly	Only for selected years
ISSP	YES	19	2	YES	YES
WVS	-	27	1	YES	NO
CC	YES	40	16	NO	YES
CPI	Partly (since 2012)	35	20	NO	Partly (since 2012)
IPI	-	37	1	NO	NO

Source: WVS, ESS, Eurobarometer, ISSP, GCB, CC, CPI.

Consistency of methods is present in CC, ESS and ISSP. These measures have not changed their methodology neither questionnaires. Eurobarometer has consistent methods until 2013, CPI since 2012 and GCB changed questionnaire frequently therefore consistency is problematic. Highest country coverage has CC when compared to CPI and from the public opinion surveys it is GCB followed by ESS and Eurobarometer. On the other hand CPI has higher time coverage than CC, and in the case of public opinion surveys, the highest time coverage has again GCB followed by Eurobarometer. For microanalysis the best measures are ISSP, WVS, and ESS. For the analysis in time, Eurobarometer survey is the best survey (excluding the 2013 survey) or ISSP, depending on the research focus. In the case of composite indices, data from the WB are the only option if a researcher wants to analyse in time data prior to the year 2012.

3.4.2. Quantitative assessment

This part of the dissertation will focus on correlations within the different types of indicators. It will also look deeper into specificities in the correlations and will analyses irregularities within specific surveys (if any).

3.4.2.1. First generation

Table 11 shows correlations between the Control of Corruption and the Corruption Perception Index. One can see that average correlation between the CC and CPI on the European level is 0.98, which is extremely high. This might be due to the fact that both indices are aggregated from similar surveys and by similar methods; it seems that the differences discussed above do not have almost any effect on the differences in the results. From this point of view it does not matter which indicator one uses for an analysis about corruption perceptions.

However, even though correlation is extremely high, it is interesting to observe the different strength of correlations in different countries. Figure 13 shows scatterplots with relations between standardized scores of CC and CPI from selected years[8]. As scatterplots with the standardized scores of corruption show, countries with lower perceived corruption are correlated much better than countries with bigger problems with corruption and this phenomenon is present in all years. However, this difference is not random, in all cases the World Bank evaluates the countries with worse perceived corruption more strictly.

[8] However, this effect is present in all years.

Table 11: Correlations – CC and CPI

Year	Correlation	N
1996	0.9518	20
1998	0.9502	29
2000	0.9829	33
2002	0.9643	34
2003	0.9742	38
2004	0.9804	39
2005	0.9852	39
2006	0.9862	39
2007	0.9876	40
2008	0.9892	40
2009	0.9916	40
2010	0.9946	40
2011	0.9913	40
2012	0.9921	40
2013	0.989	40
2014	0.988	40

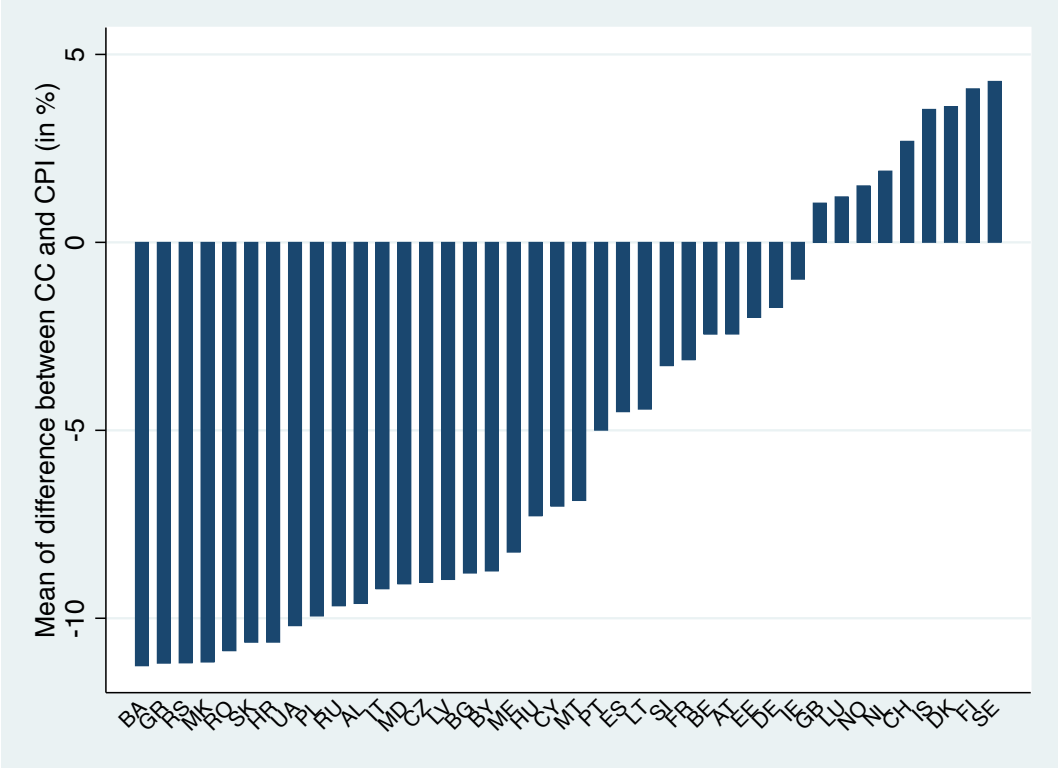
Source: CPI and CC, own calculations. All correlations are significant on $p<0.001$.

Figure 13: Standardized CC and CPI scatterplots

Source: CC, CPI

Yet another visualisation is made in Figure 13. It shows the mean difference between standardized values of CPI and CC over the years 1996-2014. It is visible that some countries have larger difference in their corruption assessment by composite indices, in the most extreme cases even by more than 10 %.

Figure 14: Mean of difference between CC and CPI (in %) in 1996-2014



Source: CC, CPI

Obviously, the difference is not very big, but it is important to keep in mind that countries with higher perceived corruption problems have the biggest differences within composite indices with the TI being softer with the rating.

3.4.2.2. Second generation

Following tables (Table 12 and Table 13) show correlations among composite indicators and every survey presented in this paper by years. It is expected that public opinion perception measures would correlate well with composite indices as they both measure concept of corruption perception. However, one must be careful in making rush conclusions about the quality of surveys based on the correlation results, because most of the surveys have been conducted in different years and also cover different countries. For the perception of corruption mostly

perception of how the judiciary is corrupt is used because that was with minor exceptions present in every survey each year[9].

Table 12: Pair-wise correlations: Corruption perceptions surveys vs. composite indices

1996	WVS	CPI	CC
WVS	1		
N	27		
CPI	-0.94***	1	
N	11	20	
CC	-0.84***	0.95***	1
N	26	20	39

*p< 0.05; **p< 0.01; ***p< 0.001. WVS uses perceptions of how public officials are corrupt.

2004	GCB	CPI	CC
GCB	1		
N	30		
CPI	-0.88***	1	
N	30	39	
CC	-0.87***	0.98***	1
N	30	39	40

*p< 0.05; **p< 0.01; ***p< 0.001.

2005	Eurobarometer	GCB	CPI	CC
Eurobarometer	1			
N	25			
GCB	0.86***	1		
N	16	28		
CPI	-0.85***	-0.93***	1	
N	25	28	39	
CC	-0.86***	-0.92***	0.99***	1
N	25	28	39	40

*p< 0.05; **p< 0.01; ***p< 0.001.

[9] Eurobarometer 2013 did not include judiciary therefore I included public prosecutors, ISSP included only politicians and public officials in their questionnaire therefore I use public officials and WVS analyses corruption among public officials.

2006	ISSP	GCB	CPI	CC
ISSP	1			
N	19			
GCB	0.91***	1		
N	15	27		
CPI	-0.90***	-0.93***	1	
N	19	27	39	
CC	-0.93***	-0.93***	0.99***	1
N	19	27	39	40

*p< 0.05; **p< 0.01; ***p< 0.001. ISSP is perceptions of how much are public officials corrupt.

2007	Eurobarometer	GCB	CPI	CC
Eurobarometer	1			
N	27			
GCB	0.86***	1		
N	19	30		
CPI	-0.81***	-0.91***	1	
N	27	30	40	
CC	-0.8***	-0.91***	0.99**	1
N	27	30	40	40

*p< 0.05; **p< 0.01; ***p< 0.001.

2009	Eurobarometer	GCB	CPI	CC
Eurobarometer	1			
N	27			
GCB	0.9***	1		
N	16	27		
CPI	-0.84***	-0.87***	1	
N	27	27	40	
CC	-0.84***	-0.89***	0.99***	1
N	27	27	40	40

*p< 0.05; **p< 0.01; ***p< 0.001.

2010	ESS	CPI	CC
ESS	1		
N	27		
CPI	-0.91***	1	
N	27	40	
CC	-0.91***	0.99***	1
N	27	40	40

*p< 0.05; **p< 0.01; ***p< 0.001.

2011	Eurobarometer	GCB	CPI	CC
Eurobarometer	1			
N	27			
GCB	0.92***	1		
N	20	31		
CPI	-0.86***	-0.89***	1	
N	27	31	40	
CC	-0.85***	-0.88***	0.99***	1
N	27	31	40	40

*p< 0.05; **p< 0.01; ***p< 0.001.

2013	Eurobarometer	GCB	CPI	CC
Eurobarometer	1			
N	28			
GCB	0.82***	1		
N	21	30		
CPI	-0.66**	-0.91***	1	
N	28	30	40	
CC	-0.64**	-0.91***	0.99***	1
N	28	30	40	40

*p< 0.05; **p< 0.01; ***p< 0.001. Eurobarometer does not include judiciary in 2013 so I used public prosecution service. I also correlated Courts, however, with even worse results.

The correlation tables show whether there is a link between various public opinion surveys and composite indices. It is visible that in general they correlate quite well with each other suggesting that they might be actually reliable in ascertaining the corruption perceptions; especially ISSP, WVS and ESS correlate very well with CPI and CC, often with correlations above 0.9.

One can see that GCB has in all cases higher correlations with composite indices than Eurobarometer (which is not surprising especially in the case of CC which uses GCB and one of their sources). However, even though Eurobarometer's correlations are lower, they are still as high as 0.8, but in 2013, the correlation drops to around 0.65. This is probably due to the change in the questionnaire where the option judiciary was dropped from the battery therefore public prosecutors are now in the analysis.

It is also not a surprising result that also different perception surveys correlate very well with each other. GCB and Eurobarometer were conducted in the same year five times and the correlation analysis shows that each year the correlations were extremely high, usually close to 0.9. Similar story can be found when comparing ISSP and GCB in 2006, where the correlation is 0.9. It is visible that even though the questions are worded differently in most of the surveys, the correlations are still very high. From the analysis it seems that all the surveys ESS, ISSP, GCB, WVS, and Eurobarometer are very suitable for further research, however, Eurobarometer again only until 2013.

Next table shows experience-based measures correlated to each other. It is not plausible to make conclusions based on the correlations between composite indices or perception measures and experience based measures because each of this indicator measures different type of corruption, as discussed above.

Table 13: Pair-wise correlations among experience-based surveys

2004	**GCB**	**ESS**
GCB	1	
N	29	
ESS	0.89***	1
N	19	25

*p< 0.05; **p< 0.01; ***p< 0.001.

2005	**Eurobarometer**	**GCB**
Eurobarometer	1	
N	25	
GCB	0.96***	1
N	15	27

*p< 0.05; **p< 0.01; ***p< 0.001.

2006	**ISSP**	**GCB**
ISSP	1	
N	19	
GCB	0.81**	1
N	15	26

*p< 0.05; **p< 0.01; ***p< 0.001.

2007	Eurobarometer	GCB
Eurobarometer	1	
N	27	
GCB	0.75**	1
N	16	26

*p< 0.05; **p< 0.01; ***p< 0.001.

2009	Eurobarometer	GCB
Eurobarometer	1	
N	27	
GCB	0.79**	1
N	15	26

*p< 0.05; **p< 0.01; ***p< 0.001.

2011	Eurobarometer	GCB
Eurobarometer	1	
N	27	
GCB	0.82***	1
N	21	32

*p< 0.05; **p< 0.01; ***p< 0.001.

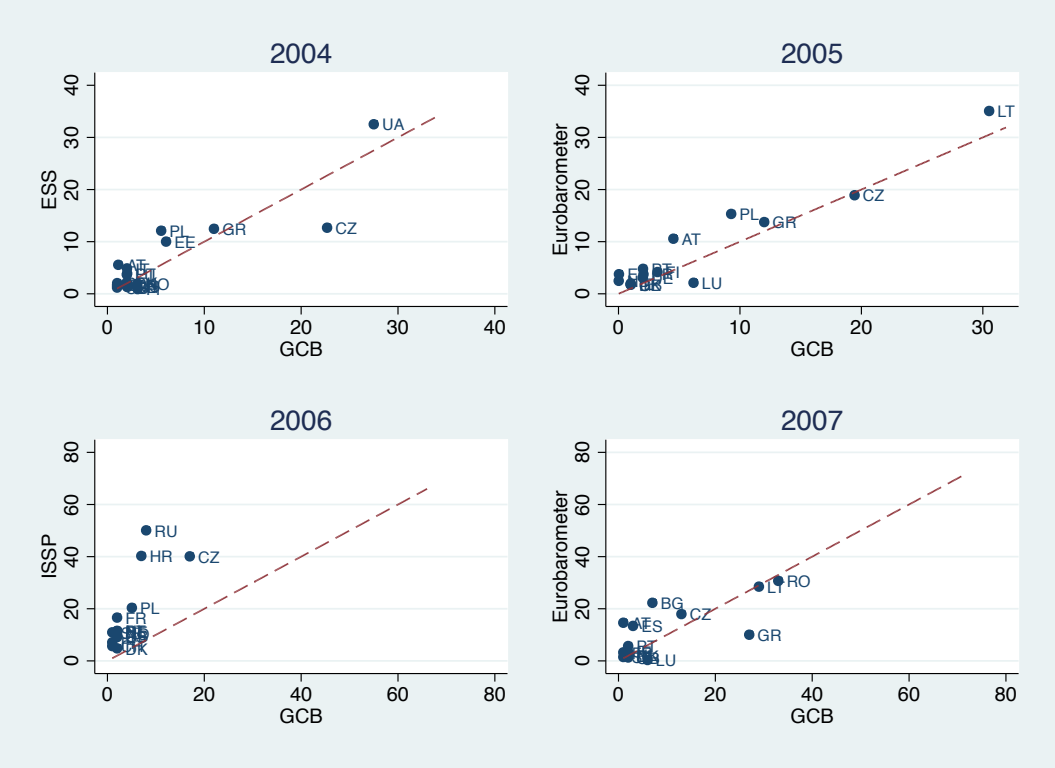
2013	Eurobarometer	GCB
Eurobarometer	1	
N	28	
GCB	0.7**	1
N	19	26

*p< 0.05; **p< 0.01; ***p< 0.001.

From the correlation analysis it is visible that the correlations are very high, even as high as 0.96 as in the case of 2005 Eurobarometer and GCB. The lowest found correlations are 0.69 in the case of Eurobarometer and GCB in 2006, which is still relatively high and significant on $p<0.01$. None of the indicators is an outlier despite the differences in the question wordings.

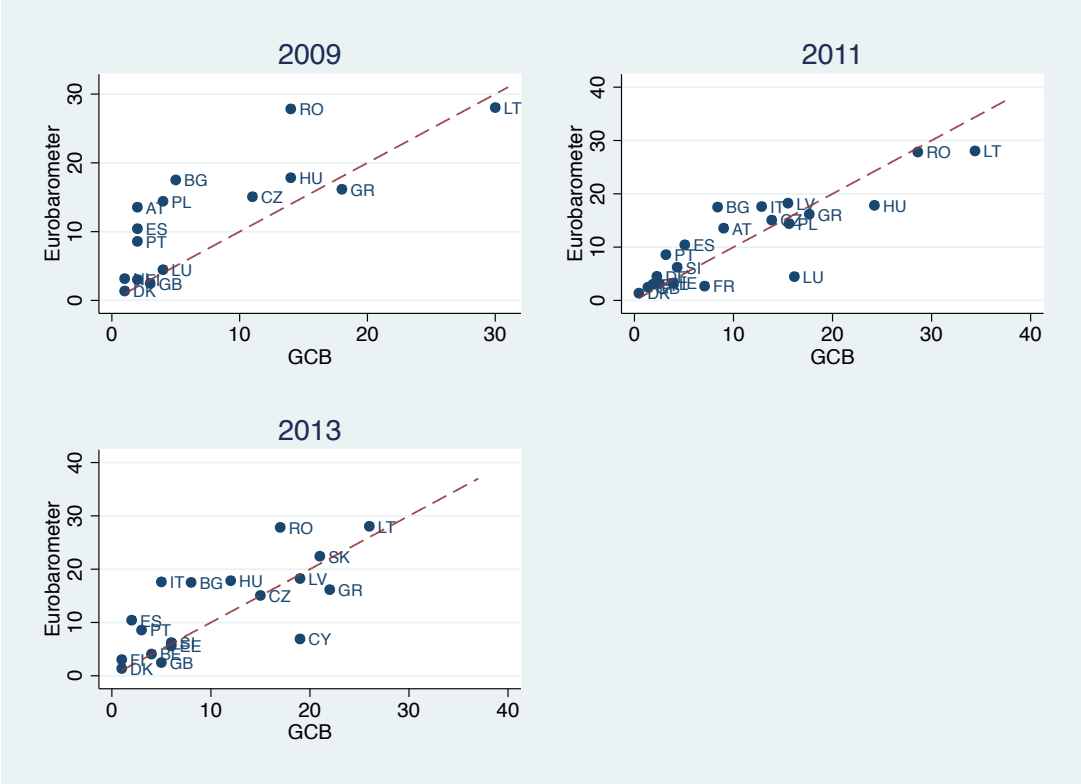
Thanks to the fact that experience based indicators measure real experience with corruption, it is plausible to compare real numbers of indicators across countries. All indicators are recoded into scale, which shows whether respondents have had at least once experience with bribery. Figure 15 and Figure 16 show these results, dashed line is x=y, it therefore shows hypothetical perfect correlation between two indicators.

Figure 15: Scatterplots – experience with corruption



Source: GCB, ESS, ISSP, Eurobarometer

Figure 16: Scatterplots – experience with corruption



Source: GCB, Eurobarometer

Graphs show that there is no specific trend as in the composite indices, the results are different but the difference seems random. The only exception is ISSP, which shows much higher experience with corruption than GCB, and the results are curious even in comparison with other countries. It seems that respondents in the ISSP survey have much worse experience with corruption than in the rest of the surveys. For example, 40 % of respondents in the Czech Republic answered that they have had experience with bribery in the past 5 years, as opposed to ESS survey from 2004 where only 13 % of respondents experienced bribery in the past five years. Even countries which are understood as non-corrupt have very high results in the ISSP – for example in Denmark, 5 % of respondents experienced corruption, and in Finland even 7 %. The explanation of these results might be in the combination of factors, ISSP asks for experience in the last five years, on experience of respondent or his family, and finally, ISSP does not filter out people with no experience with public authorities. Therefore using ISSP for experience-

based corruption analysis should be done with caution. However, as mentioned, the differences between experience-based surveys might also be in the way the question is posed, Eurobarometer and GCB ask on the experience in the last 12 months as opposed to five years as in the case of ESS or ISSP. Also, ESS or ISSP asks on the request of bribery from public officials, other surveys (Eurobarometer and GCB) list possible institutions where the respondents were possibly requested a bribe. Finally, ISSP asks on the experience of respondent and his immediate family, GCB asks on respondent and anyone living in his household, and finally, Eurobarometer and ESS ask on the experience of the respondent him/herself.

Company surveys

Table 14: Correlation analysis between first and second generation

Type	Survey	Year	N	CPI	CC
Experience: Companies	BEEPS	1999	17 CPI 18 CC	-0.53*	-0.47*
Experience: Companies	BEEPS	2002	16 CPI 18 CC	-0.76**	-0.76**
Experience: Companies	BEEPS	2009	19	-0.83***	-0.86***
Experience: Companies	BEEPS	2012-14	19	-0.66**	-0.7**

Source: BEEPS, CC, CPI. In 1999 there is no data for CC, therefore it is the average of 1998-2000. Spearman correlation coefficient *p< 0.05; **p< 0.01; ***p< 0.001. The analysis does not include Eurobarometer due to the very low number of respondents, which substantially reduces the representativeness survey, as mentioned above.

As table above (Table 14) shows, BEEPS do not have the same level of correlation in all years, more strongly are correlated with CC and CPI BEEPS from the year 2002 and 2009, and less strongly in 2012-2014 and 1999.

3.4.2.3. Third generation

Table 15 shows the results of correlation analysis IPI indicators with first and second generation. Possibility of correlation analysis is in the case of the third generation indicator very limited because the IPI was founded in 2016, there are no older data. For the purposes of this comparative analysis, we will use the latest indicators, this means CC and CPI from 2014 and the GCB and the Eurobarometer of 2013 and BEEPS from 2012 to 2014. The advantage is that we can compare to all types of generations of indicators.

Table 15: Correlation: third generation vs. first and second generations

Type	Survey	Year	N	IPI correlation
Composite indicator	CPI	2014	34	0.95***
Composite indicator	CC	2014	34	0.95***
Perception: prosecutor	Eurobar	2013	27	-0.66**
Experience	Eurobar	2013	27	-0.58**
Perception	GCB	2013	28	-0.86***
Experience	GCB	2013	23	-0.76***
Experience: Companies	BEEPS	2012-14	17	-0.55*

Source: BEEPS, GCB, Eurobarometer, CC, CPI. Spearman correlation coefficient. *p< 0.05; **p< 0.01; ***p< 0.001.

Results of the analysis in Table 15 are in many respects surprising, IPI has correlation with indicators of the first generation at 0.95, which is an extremely high correlation. It is possible that these two indicators measure the same phenomenon and can therefore be interchanged. It is very interesting that the indicator, which is largely based on objective data, has the same results with the indicator, which measures only the views of experts. Thus, such a strong correlation is suspicious, the question should be asked how exactly the authors weigh the indicator based on the individual parts. With results of the previous correlation analysis, it is not surprising that the results of correlation of the second and third generation are also relatively strong. We cannot directly compare the strength of correlations, because there are other countries represented, but the trend is the same. Perception of corruption is correlated relatively strongly and experience with corruption concerning both companies and citizens are weakly correlated.

3.5. Indicators used in this dissertation

The results of this analysis show which surveys and composite indices are suitable for which types of analysis. Even though there is extensive research on the methodology and especially critique of the composite indices and public opinion surveys, the literature looking at the specific differences within these indicators in relation to their usability and validity is lacking. This

unfortunately results in a situation that many authors write quantitative articles about corruption using either wrong measures, or using these measures in a wrong manner. Even though differences between measures might be very subtle, they are crucial to ensure the validity of results, especially in the research of such an ambiguous area as corruption.

Until now the most widely used indicators have been composite indicators either by the WB (CC) or TI (CPI). As the correlation analysis showed, these two indicators are extremely well correlated over years, for the purposes of research on corruption on the cross national level there is not huge difference in which indicator would be used. Interestingly, despite the very high correlations, certain tendencies can be found, especially for countries with worse perceived corruption situation. It seems that the World Bank is stricter in their evaluation of these countries, and this tendency is present in all years. Unfortunately, as discussed many times, as we are not able to ascertain the real level of corruption, it is not possible to state which composite indicator is correct in their measures. However, in analysing countries with corruption problem, such as post-communist countries, both indicators should be used in order to avoid biases due to different scores in these countries. From the qualitative assessment it is obvious that CPI is older by one year and has more time points, but CC uses more data sources, it covers more European countries, and it also has not changed the methodology over the years as CPI has, therefore the indicator is comparable over time. CC is also more user friendly as it allows downloading all the data in one excel file. For these reasons CC by the WB should be chosen over the CPI by the TI.

Corruption perception surveys are very well correlated with the composite indices (very often more than 0.9) suggesting that there would not be extremely great differences in results when using these indicators concerning the research of corruption. The only exception is Eurobarometer 2013, which has the lowest correlations with the composite indices (0.64). The results of the correlation analysis show that the public perceives corruption very similarly to the experts, which is a very interesting outcome as it shows certain validity of perception measures. Experience based measures are also very well correlated to each other despite the differences in wordings and in the target population suggesting that none of the surveys has a fundamental problem. The only exception is ISSP, which shows very high experience with corruption, much

higher than in other surveys, however, correlations are still very high, and the reason for this is probably in the different wordings and different scope.

Qualitative assessment showed that despite the fact that GCB has the best time and country coverage, it is probably the worst measure in analysing corruption perceptions and experience with corruption because it has significantly and very frequently changed wordings of the questions making time comparison impossible. It also includes only very limited selection of demographic questions making deeper analysis on this dataset uninteresting. WVS was conducted only once and shows curious results therefore posing doubts on validity of results of the corruption perceptions. ESS and ISSP are both suitable surveys for further analysis, ESS covering more countries, but on the other hand conducted just once therefore impossible for time series analysis. Eurobarometer is another really good option with broad coverage of countries, possible analysis in time (with the exception of 2013) and larger possibility of broader analysis (compared to GCB). There are therefore more possibilities among perception public opinion surveys depending on the needs of the researcher.

For corruption analyses of perceptions is should be recommended using combination of composite indices and public opinion surveys as composite indices might show wider context thanks to time and country coverage and public opinion surveys then might be helpful in microanalysis in reasons behind different perceptions. For experience-based analysis of corruption the best indicator seems to be Eurobarometer (without the 2013 survey) as it has wide time and country coverage, it is comparable in time and offers possibilities of microanalysis.

Therefore for this dissertation, Control of Corruption by the WB will be used as the main indicator, as it has the largest time and country coverage and it is comparable in time. When needed the data about experience with corruption, Eurobarometer survey will be used with the exception of the 2013 round.

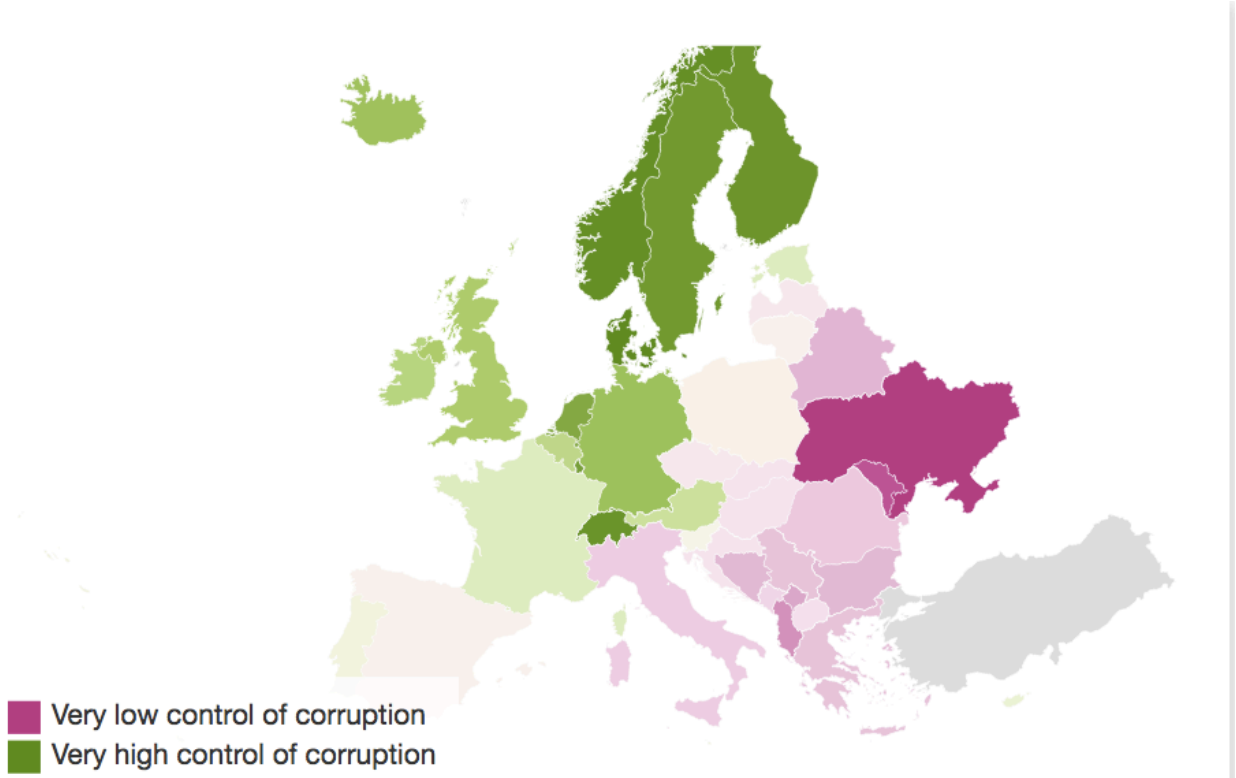
4. ANALYTICAL PART

In this chapter the hypotheses set in the theoretical part are tested with the use of the variable corruption as measured by the indicators discussed in the methodological part. It will be assessed whether the hypothesis tested on a global level hold also in the case of European countries and more specifically, if there is any difference between the European counties and post-communist European countries.

4.1. Descriptive Analysis

This chapter uses descriptive statistics to show and discuss the development of corruption in European countries. Specifically, it discusses the differences between countries that experienced communist rule and the rest. Corruption in European countries is on a much lower level compared to the most of the world; especially Scandinavian and Western European countries consistently hold the top places as countries with the lowest levels of corruption. However, even though corruption in Europe in general is very low, post-communist European countries are an exception with levels of corruption consistently high as warns for example the World Bank through its indicator Control of Corruption (Figure 17).

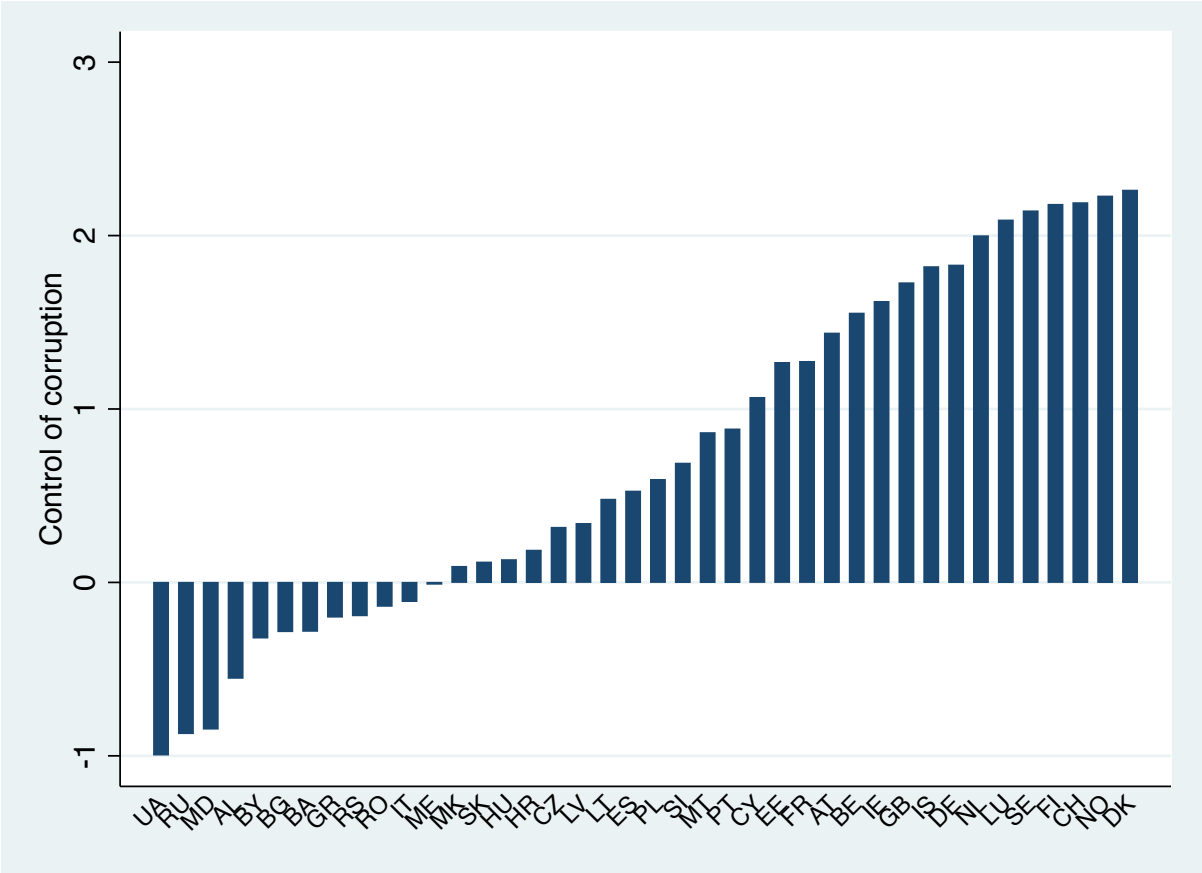
Figure 17: Control of Corruption, map - 2014



Source: World Bank. Control of Corruption shows how the countries are successful in controlling corruption, the indicator goes from -3 to 3, while 3 indicates that country is successful in controlling the level of corruption.

Figure 17 shows that indeed, even today, there is a difference between post-communist countries and countries, which have never had communist rule. Figure 18 is a different visualisation of the same data showing more straightforwardly the ranks of countries in Control of Corruption.

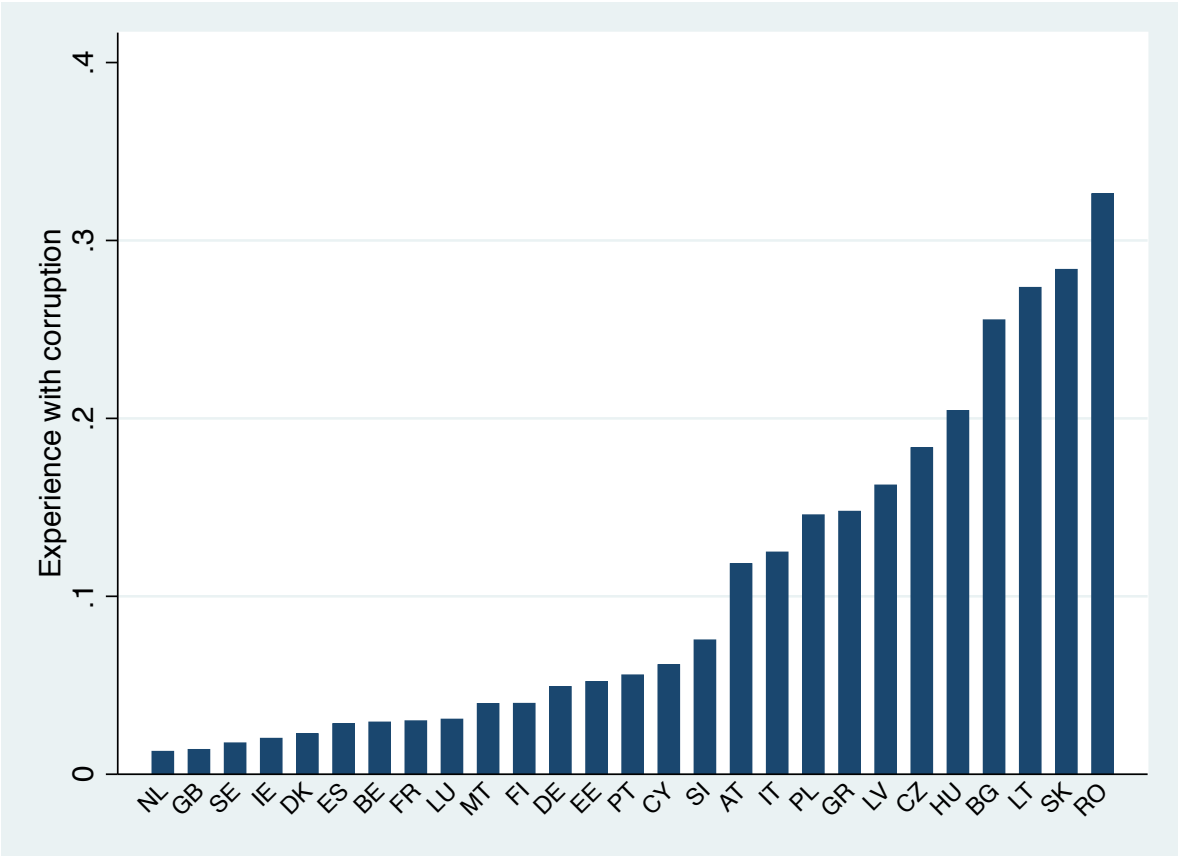
Figure 18: Control of Corruption, 2014



Source: World Bank. Control of Corruption shows how the countries are successful in controlling corruption, the indicator goes from -3 to 3, while 3 indicates that country is successful in controlling the level of corruption.

In general, post-communist countries have Control of Corruption around or below zero, which means they have relatively low Control of Corruption. The rest of European countries have Control of Corruption over zero, meaning in general higher control over corruption. Of course the division is not perfect, Greece is doing very poorly as being eighth from the bottom, followed by Italy, which is eleventh from the bottom. On the other hand, Estonia is clearly the winner of post-communist countries and Slovenia and Poland are not doing badly either. Similar results can be observed through direct experience with corruption (Figure 19).

Figure 19: Direct experience with corruption, Eurobarometer 2011



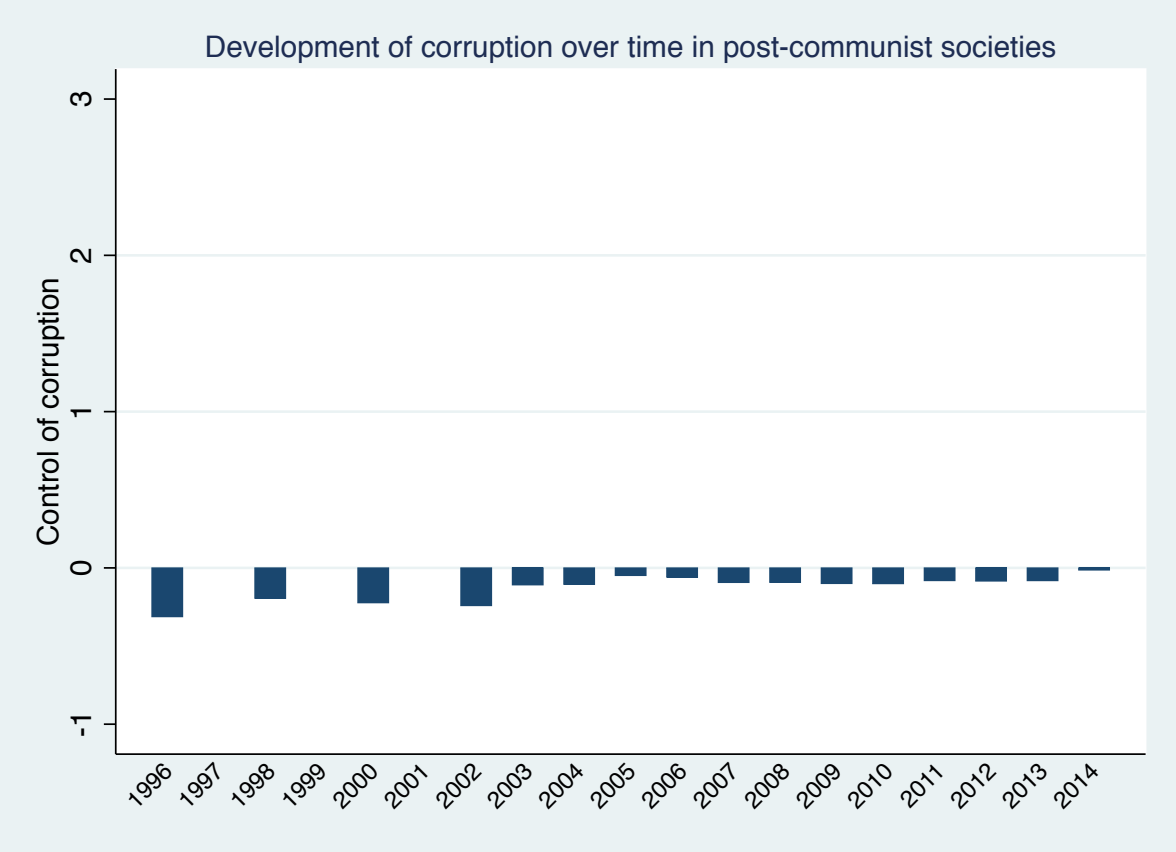
Source: Eurobarometer 2011, Share of respondents who were in touch with bribery

One of the surveys measuring direct experience with corruption conducted on the European level is a survey done by the Eurobarometer in 2011. The question was worded: "Over the last 12 months, has anyone in [your country] asked you, or expected you, to pay a bribe for his or her service?" Figure 19 shows the answers for this question as average of each country. One can observe that the experience with corruption varies quite a lot among countries, out of 27 countries; in 12 countries less than 5 % of the respondents experienced a request for bribery. However, on the other hand in Romania, more than 30 % of respondents experienced corruption. Also, we have to keep in mind that Eurobarometer surveys only member states of the EU, therefore the most corrupt countries such as Ukraine or Belarus are not included here. The line between post-communist countries and the rest of the countries is quite clear with exception of Greece and Italy on one side and Estonia on the other.

4.1.1. Development of corruption in time

Figure 20 shows the situation in post-communist countries as measured by the World Bank. It shows the average Control of Corruption in 10 post-communist countries in almost 20-year period. The graph shows that in the case of post-communist countries it seems that the level of corruption does slowly decrease over time. This suggests that in post-communist countries there is a positive development towards less corruption. However, the graph of average Control of Corruption does not indicate whether there is for example one country, which is an outlier and pushing the average up. For this the following table is more plausible, as it shows the development of corruption by each post-communist country.

Figure 20: Control of Corruption in post-communist countries



Source: World Bank. Control of Corruption shows how the countries are successful in controlling corruption, the indicator goes from -3 to 3, while 3 indicates that country is successful in controlling the level of corruption.

Table 16 shows that there is a significant difference within post-communist countries. In fact, on average, the Control of Corruption remains on a similar level between 1996 and 2014, increasing most significantly in Serbia, Croatia or Macedonia, but decreasing in Slovenia, Hungary or in Moldova. It is therefore important not to only look at the post-communist countries as a group, but to also observe the differences within countries.

Table 16: Development of Control of Corruption in post-communist countries

Country/year	1995-1999	2000-2004	2005-2009	2010-2014	Difference
AL	-1.05	-0.78	-0.65	-0.63	0.42
BA	-0.31	-0.36	-0.32	-0.29	0.03
BG	-0.51	-0.10	-0.17	-0.25	0.26
BY	-0.78	-0.73	-0.69	-0.56	0.22
CZ	0.60	0.32	0.32	0.26	-0.34
EE	0.26	0.75	0.93	1.03	0.77
HR	-0.77	0.10	0.03	0.05	0.81
HU	0.62	0.62	0.50	0.25	-0.36
LT	-0.01	0.21	0.10	0.33	0.35
LV	-0.42	-0.02	0.22	0.21	0.64
MD	-0.25	-0.82	-0.61	-0.70	-0.45
ME		-0.54	-0.29	-0.16	
MK	-0.82	-0.68	-0.29	0.01	0.82
PL	0.60	0.34	0.26	0.52	-0.08
RO	-0.45	-0.35	-0.19	-0.20	0.25
RS	-1.06	-0.75	-0.32	-0.26	0.79
RU	-0.98	-0.82	-0.94	-0.99	-0.02
SI	1.31	0.84	0.97	0.79	-0.52
SK	0.30	0.19	0.34	0.14	-0.16
UA	-1.09	-0.96	-0.78	-1.02	0.08
Average	-0.25	-0.18	-0.08	-0.07	0.19

Source: World Bank. Control of Corruption shows how the countries are successful in controlling corruption, the indicator goes from -3 to 3, while 3 indicates that country is successful in controlling the level of corruption.

4.2. Quantitative Analysis

This chapter is the core of this dissertation, it tests our hypotheses settled in the theoretical part by the use of statistical methods and offers an insight into the possible causes of corruption in Europe and answers the question whether post-communist countries have different results concerning corruption than the rest of European countries. This chapter presents various analysis of the models explaining corruption on European countries. The aim is to test hypotheses and to find gaps in the results presented by different authors described in the theoretical section.

4.2.1. Methodology

For the analysis 40 European countries are used as being the full sample of Europe[10]. Of the countries included, 20 do have a communist past and the rest (20) do not. Table 17 shows countries included into this analysis and their abbreviations.

Table 17: Countries and their abbreviations

Albania	AL	Lithuania	LT
Austria	AT	Luxembourg	LU
Belarus	BY	Macedonia	MK
Belgium	BE	Malta	MT
Bosnia	BA	Moldova	MD
Bulgaria	BG	Montenegro	ME
Croatia	HR	Netherlands	NL
Cyprus	CY	Norway	NO
Czech Republic	CZ	Poland	PL
Denmark	DK	Portugal	PT
Estonia	EE	Romania	RO
Finland	FI	Russia	RU
France	FR	Serbia	RS
Germany	DE	Slovakia	SK

[10] Turkey is not included even though it is sometimes categorized as European country.

Greece	GR	Slovenia	SI
Hungary	HU	Spain	ES
Iceland	IS	Sweden	SE
Ireland	IE	Switzerland	CH
Italy	IT	Ukraine	UA
Latvia	LV	United Kingdom	GB

Five main hypotheses are tested; each of them is firstly focused on the European countries in general and then in case of found irregularities, the second sub-hypothesis focuses on post-communist countries. The hypotheses were presented at the end of the theoretical part and are again presented below:

H1: Control of Corruption will be higher in countries with lower income inequalities

H1a: In post-communist countries this relation will be weaker

This hypothesis is based on literature and research, which found that there is relation between income inequality and corruption; specifically that high income inequality is associated with higher corruption. In the case of post-communist countries this relation might be weaker due to the low income inequality in general which is due to the history of communism.

H2: Control of Corruption will be higher in countries with higher GDP per capita

H2a: In post-communist countries this relation will be stronger than in the rest of Europe

According to previous research, higher GDP is associated with lower corruption. As countries without the history of communism have higher GDP in capita, the results of regression analysis might be weaker; this was supported by authors presented in the theoretical section.

H3: Control of Corruption will be higher in countries with a higher share of Protestants

H3a: In post-communist countries this relation will be similar as in the rest of Europe

High share of Protestants is according to vast literature and research associated with lower corruption. This might be due to the more individualistic nature of Protestant religion. As there should be no differences in this religion between post-communist countries and the rest of Europe, the hypothesis does not expect differences between these two regions.

H4: Control of Corruption will be higher in countries with higher generalized trust

H4a: In post-communist countries this relation will be weaker

Corruption is according to the literature associated with low generalised trust. However, in the case of post-communist countries this relation might be stronger as due to the nature of communist rule, particularised trust was more important than generalised and this can last until today.

H5: Control of Corruption will be higher in countries with lower security values

H5a: In post-communist countries this relation will be similar as in the rest of Europe

Security values are associated with higher corruption. This relation should be similar in post-communist countries and in the rest of Europe as well. Even though the post-communist countries have in general higher security values, corruption is there in general also higher, therefore there are not expected any differences.

To test these hypotheses linear regression analysis is used and to test the development in time the multilevel methods are used.

4.2.2. Data

For the analysis the European Social Survey (ESS), UNU-WIDER, Eurostat, ARDA, WVS, and World Bank (WB) data are used as the sources for the dataset. The time frame consists of all the years, which are covered by the Control of Corruption by the WB, which is 1996-2014, which is almost 20 years. It is therefore possible not only to analyse pooled data or the state of corruption today, but also the development of corruption across both European countries and time. Not all the countries were surveyed in all the waves for all the questions concerned, so the dataset is not balanced, however, in total there is 990 country waves. OLS regression analysis is performed in order to determine the effects of various variables on corruption, for this pooled data is used and data split into different waves by five years. Finally, for the analysis in time multilevel methods are used.

4.2.2.1. Dependent Variable

Based on the analysis in Chapter 3 Control of Corruption by the World Bank is used as the main dependent variable. Experience with corruption or bribery (second generation indicator) are not used as the main dependent variable as the surveys have been conducted only few times, not every year such as first generation indicators. Finally, no third generation indicator is used because none of them allows for comparison both in time and across countries. As the Control of Corruption indicator was in detail presented in chapter 3, it is not described here.

4.2.2.2. Independent Variables

There are five independent variables based on the hypotheses derived from the theoretical part of this dissertation.

Structural variables

Two economic variables are tested, which have been found as being important for the level of corruption, that is GDP per capita and income inequality measured by the Gini coefficient. As discussed earlier, unfortunately it is not possible to use institutions as independent variable because the variable developed by Mungiu-Pippidi (2015b) uses Control of Corruption by the WB as one of the sources, therefore using this variable in analysis would be highly problematic.

For the GDP per capita the World Bank data is used (given the highly skewed nature of GDP it is important to log the indicator to have more normal distribution appropriate for the regression analysis). For the measure of inequality the Gini coefficient measured by UNU-WIDER and also by Eurobarometer is used. UNU-WIDER takes data on income inequality from various sources and puts them together based on their reliability. The latest update in the database from UNU-WIDER is only in 2012; therefore for more recent data Eurostat's database is used. UNU-WIDER used Eurostat as one of their sources for their database as well, therefore the data is comparable. The data on income inequality and GDP per capita used in this dissertation cover the whole analysed period, 1996-2014.

Cultural variables

For the cultural indicators (share of Protestants, values and interpersonal trust) the data from the European Social Survey, ARDA, and WVS are used. With the exception of data on share of Protestants (ARDA database), the data is based on public opinion surveys, not on databases, they do not cover all year in the analysed period, the analysis is therefore weaker due to this point and it is also the reason why are the data grouped into the periods of five years for some of the analyses. Even though the data on interpersonal trust and values can be obtained from different datasets and potentially the coverage might be larger, this approach would not be methodologically correct. The reason for this is that different surveys use very different methods, as is was clearly shown in the methodological chapter about measuring corruption, and merging different surveys into one variable is highly problematic and the advantage of having higher coverage does not outweigh the problem of different methods across surveys.

To discover the share of Protestants in a country, the data from ARDA are used, which provides data on the percentage of population practicing religion in each state for every five years. Data for the large number of years separately exist; however, the share of Protestants is available only every five years. For the reason that this share does not change significantly from one year to another interpolation is used to fill the missing years and increase the number of observations.

Finally, ESS is used as the resource for interpersonal trust and values as the data is gathered every two years since 2002 in almost in all European countries. For the question on trust, the respondents were asked whether they believe that most people could be trusted (10), or whether they think that a person cannot be too careful in trusting others (0). The data shows the average opinion of a country's respondents in a given year. For the data on values Schwartz security values described in chapter 2 are used. These data show which share of the country states that values such as safety, harmony and stability of society, of relationships, and of self (family security, national security, social order, clean, reciprocation of favours) are important for them. The data is weighted and analysed in line with the methodology proposed in the ESS (Schwartz, 2007). Higher number in the model means lower security values.

4.2.3. Results

4.2.3.1. Pooled data

Firstly, it is tested whether the theories explaining the level of corruption on the global scale also work on the European level. It is expected that the results should be similar to those on the global scale, i.e. that a higher GDP per capita, lower income inequality, higher generalized trust, higher share of Protestants, and low Security values should be connected with higher levels of the Control of Corruption. The equation for the model looks as follows:

$$\textbf{Control of Corruption}_i = \alpha_i + \beta \textbf{ log GDP per capita}_i + \gamma \textbf{ Share of protestants}_i - \delta \textbf{ Gini}_i + \zeta \textbf{ generalized trust}_i + \eta \textbf{ values}_i - \theta \textbf{ communist history}_i + \varepsilon_i$$

The results can be seen in Table 18 as Model 1.1; Interpersonal trust, security values, and GDP per capita support the hypotheses, but surprisingly, the Gini coefficient is not significant, meaning that income inequality is not connected to the Control of Corruption in Europe, and similarly, the share of people claiming to be Protestant is not significant.

Table 18: Determinants of Control of Corruption (OLS regression)

	1.1. Full Model
Gini coefficient	-0.03 (0.007)
GDP per capita (ln)	0.625 (0.06) ***
Share of Protestants	0.279 (0.19)
Generalized trust	0.213 (0.067) **
Low Security Values	0.44 (0.18) **
Intercept	-5.891
Adjusted R^2	0.88
Number of cases	108

*p < 0.05; **p < 0.01; ***p < 0.001

However, it is visible that the number of countries in this model is very low; out of 990 possible cases we have only 108. This is due to the lack of data in the case of the European Social Survey – the variables on trust among people and security values. Firstly, the data start only on 2002; therefore this analysis does not show results of relations prior to this year. However, this reduces the possibilities of this analysis to provide results showing the development of corruption and other variables in the years directly after the fall of the iron curtain which are the most interesting to us as there were the biggest changes. Secondly, the data from the ESS cover only 27 European

countries, and of those the majority are western developed countries, which do not have the history of communist rule. Some of the post-communist countries, such as Belarus or Moldova, which are among countries with worst corruption levels, are not included into this survey. Moreover, test of multicollinearity (Table 19) shows that variable Generalized trust has multicollinearity problems. It seems that generalized trust is very highly correlated with share of Protestants (0.82), which results in the insignificance of Share of Protestants.

Table 19: Test of multicollinearity

Variable	**VIF 1.1.**
Generalized trust	5.09
Share of Protestants	3.85
Low Security Values	2.80
GDP per capita	2.54
Gini coefficient	1.21

Model 2.1 shows the results without the problematic generalized trust, now share of Protestants is highly significant.

Table 20: Determinants of Control of Corruption without generalized trust

	Model 2.1
Gini coefficient	-0.002 (0.008)
GDP per capita (ln)	0.702 (0.06) ***
Share of Protestants	0.7 (0.134) ***
Low Security Values	0.56 (0.19) **
Intercept	-5.806
Adjusted R^2	0.87
Number of cases	108

*p < 0.05; **p < 0.01; ***p < 0.001

This result is very interesting, it seems that the relations on the European level between generalized trust and share of Protestants in a country are very important, the higher the share of

Protestants in a country, the higher the interpersonal trust, and also, the higher the Control of Corruption.

In the next phase, I split the countries according to their experience with the communist rule to evaluate if testing them separately might explain the results. As discussed above, communism has a strong influence on the level of corruption in a country. It is therefore possible that the effect of variables could be very different in countries, which have a history of communist rule as opposed to countries, which did not experience communist rule. I divide my dataset according to the history of countries; whether the country experienced communist rule or not. Firstly, I test the same model on countries, which do not have a communist history, and then on countries with a communist history.

Table 21: Determinants of Control of Corruption (OLS regression, divided sample)

	1.2. Democracies with no experience of communism	**1.3. Democracies with communist past**
Gini coefficient	-0.022 (0.01) *	0.03 (0.01) **
GDP per capita (ln)	0.23 (0.2)	0.506 (0.077) ***
Share of Protestants	0.083 (0.22)	2.88 (0.55) ***
Generalized trust	0.33 (0.1) **	-0.02 (0.077)
Low Security Values	0.35 (0.22)	1.404 (0.296) ***
Intercept	-1.69	-4.296
Adjusted R^2	0.71	0.87
Number of cases	72	36

*p < 0.05; **p < 0.01; ***p < 0.001

Countries with no experience of communism

As one can see in Model 1.2, countries without a history of communist rule show different results than in the previous model. Trust is still significant (however, with even higher problem with multicollinearity than in the Model 1.1, see Table 22) and share of Protestants insignificant, but Gini coefficient is significant and GDP per capita and values lose it significance.

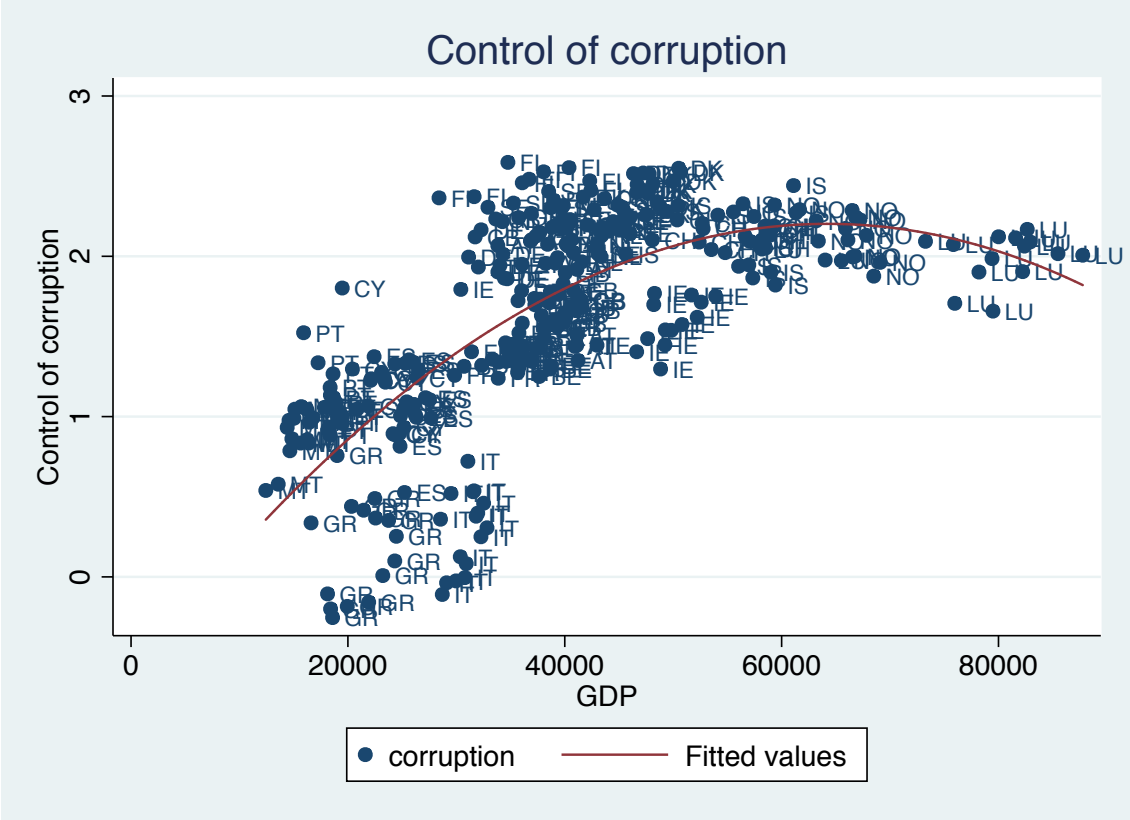
Table 22: Test of multicollinearity 2

Variable	VIF 1.2.	VIF 1.3.
Generalized trust	6.45	2.56
Share of Protestants	4.24	2.08
Low Security Values	2.86	2.04
GDP per capita	2.03	1.87
Gini coefficient	1.41	1.82

One possible explanation for the insignificant GDP might be that having a successful economy only lowers corruption to a certain level; however, when the economy exceeds this level, the effect loses its strength. This would also support our hypothesis H2a, which suggests that GDP per capita is more important for post-communist countries than for countries without the burden of communist rule. Figure 21 supports this hypothesis.

The second variable, which is not behaving according to our hypothesis, is share of Protestants, which seem to have no influence. However, as mentioned above, generalized trust has big problems with multicollinearity, it seems that generalized trust shares some similar features with the share of Protestants in a country, in fact the correlation between the share of Protestants and generalized trust is in the case of countries without communist history 0.84, which is very high. Finally security values are not important in the case of countries without communist history, meaning that they do not support our hypothesis.

Figure 21: Scatter plot, Countries with no communist past



Countries with communist past

Different results can be seen in model 1.3 in This result is very interesting, it seems that the relations on the European level between generalized trust and share of Protestants in a country are very important, the higher the share of Protestants in a country, the higher the interpersonal trust, and also, the higher the Control of Corruption.

In the next phase, I split the countries according to their experience with the communist rule to evaluate if testing them separately might explain the results. As discussed above, communism has a strong influence on the level of corruption in a country. It is therefore possible that the effect of variables could be very different in countries, which have a history of communist rule as opposed to countries, which did not experience communist rule. I divide my dataset according

to the history of countries; whether the country experienced communist rule or not. Firstly, I test the same model on countries, which do not have a communist history, and then on countries with a communist history.

Table 21, which only includes countries with a history of communist rule. All variables are important predictors of the Control of Corruption except for generalized trust, which lost its significance. Moreover, as shown in Table 19, trust in the case of post-communist countries does not suffer from the multicollinearity problem. Also, correlation between share of Protestants and generalized trust is not dangerously high as in the case of countries without the history of communism, the correlation reaches only 0.36. However, there is also another variable, which does not behave according to our hypothesis, and this is Gini coefficient. Even though the Gini coefficient is significant, it has the opposite direction than expected. First, we will discuss the results of the generalized trust, discussion in the results if Gini coefficient follows later on.

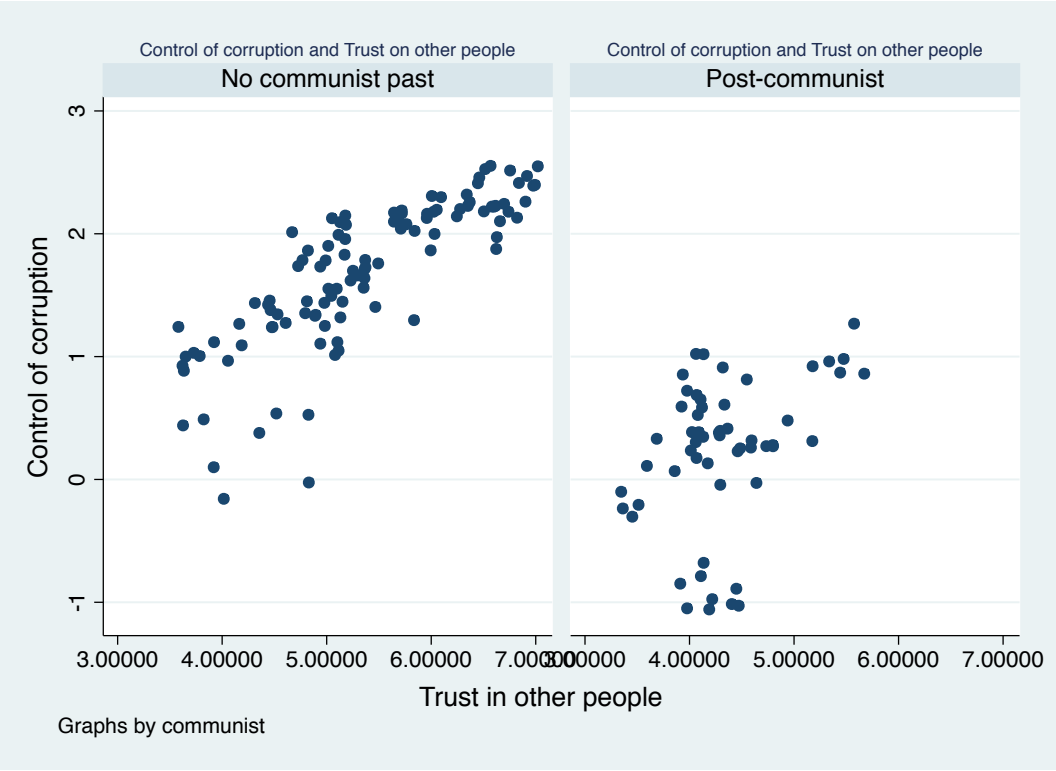
Firstly, the model including only countries with a communist history shows that in contrast to theories concerning this issue, trust in other people does not seem to have any effect on the Control of Corruption in post-communist countries. According to several authors, the proportion of people who trust others is systematically lower in post-communist countries when compared to western European democracies (Norris, 2001, p. 11; Putnam, 1993), which can also be seen inFigure 22, and also, as discussed in the theoretical part, particularized trust might be more important than generalized trust in post-communist countries.

It might possibly be the case that citizens do not trust anybody even though others might be honest and not corrupted. Low trust might not be connected to the level of corruption, because citizens generally in post-communist countries believe that they cannot trust the government and public officials, which could explain the non-significance of the result.

The second variable, which does not behave as expected, is the Gini coefficient. Theories suggest that more equality should be connected to less corruption. However, as we see in the case of post-communist countries, the relationship is non-significant. As Uslaner writes: “The connection between inequality and the quality of government is not necessarily so simple: As the former Communist nations of Central and Eastern Europe show, you can have plenty of corruption without economic inequality” (Uslaner, 2009). Scatter plot in Figure 23 shows that

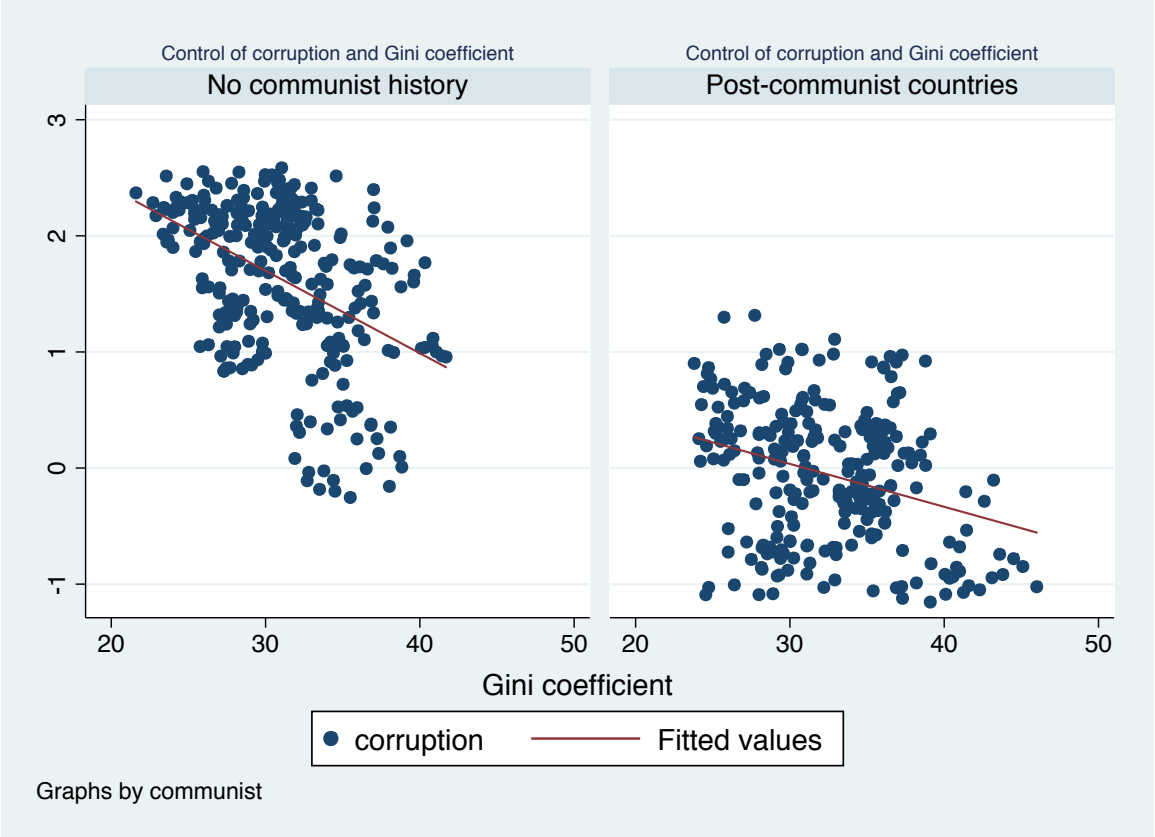
indeed Gini coefficient is weakly connected to the Control of Corruption in the case of post-communist countries. This means that the relationship is more complicated and that other variables seem to have a bigger influence than income inequality in post-communist countries.

Figure 22: Scatter plot: Control of Corruption and Trust in other people



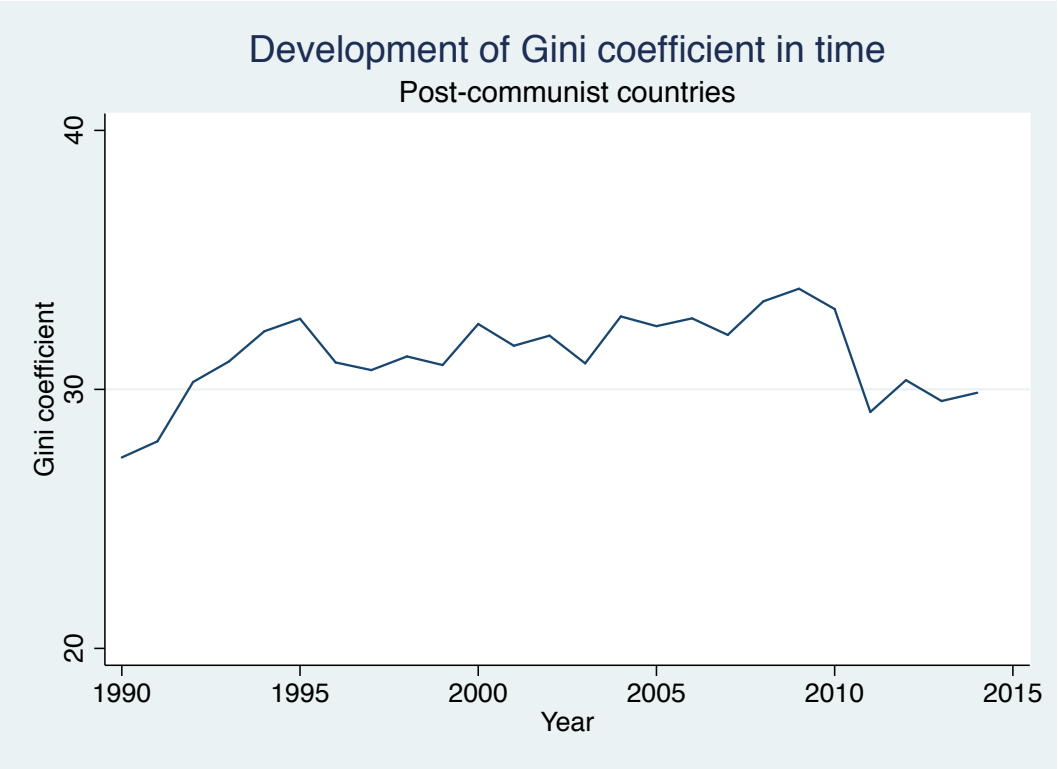
There are at least two possible explanations for this phenomenon. One explanation could be that there was a development of income inequality in time, while corruption remained static. This could, in pooled data, create a negative effect between income inequality and Control of Corruption. A similar explanation is suggested by Uslaner (2009), who argues that even though post-communist countries have low income inequality and high levels of corruption – which undermines the theory of income inequality increasing corruption – this state is only temporary.

Figure 23: Scatter plot, pooled data: Control of Corruption and Gini coefficient



According to him, after transition to democracy, income inequality should boost and catch up with the rest of Europe. However, as Figure 24 shows, this point seems to be valid only partly. Income inequality on average was rising in the earliest years but after these years stopped rising; on the contrary, it is slightly decreasing in the latest years. Obviously, there will be important differences within post-communist countries; some of the countries might have very high inequality, which is sharply increasing. We will look at this problem in detail later in this dissertation.

Figure 24: Gini coefficient in post-communist countries



Source: UNU-WIDER, Eurostat

An alternative explanation for this can be found in the ideology of communism. The communist ideal was that everybody should be made equal; therefore countries, which experienced more severe communist rule, should theoretically be more equal and at the same time they might have lower Control of Corruption. A comparative study of post-communist countries would be needed to test this hypothesis. Finally, accepting that corruption is widespread in post-communist countries (Karklins, 2005) might lead us to a different explanation. When income inequality is low, everybody has a more or less equal economic opportunity to bribe. On the other hand, when income inequality is very high, there are more poor people (connected to the fact that GDP per capita is lower in post-communist countries) who are not financially able to bribe, so corruption activities remain only for those who are wealthy.

To improve our model based on these preliminary results we can use interactions, which might confirm or falsify the results in the previous models. We can test whether interacting income inequality with communist history would still be important predictor and similarly whether GDP per capita and security values in interaction with communist history would confirm the preliminary results, that there is an important different between these two regions.

4.2.3.2. Interactions

Previous models showed whether hypotheses about the influence of various variables on corruption, which work on a global level, work also on the European level. It seems that on the European level, there are several problems, namely share of Protestants (however, rather generalized trust) and Gini coefficient are problematic. This puzzle was partially solved by splitting the dataset into two groups – post-communist countries and the rest of Europe. It was shown that generalized trust has problems with multicollinearity in the case of countries without the history of communism and that it is not an important variable in post-communist countries, but on the other hand GDP per capita is important only in post-communist countries. Gini coefficient is the most puzzling variable, because it is non-significant in the results of Europe overall, but significant in the split dataset in both post-communist countries and the rest of Europe, but in each of these two groups, the significance has opposite direction. In post-communist countries, higher inequality means less corruption and in the rest of Europe this relation is the opposite; higher inequality means higher corruption levels. For these models generalized trust is not used due to multicollinearity problems discussed above.

Table 23 shows the results of OLS regression analysis when using interactions in the case of variables which had different effects in post-communist countries and the rest of Europe. This was the case of the Gini coefficient - this variable was significant in both of these groups, however, the relation had the opposite direction. Moreover, this was also the case in the case of values and GDP, which both were significant in the case of post-communist countries and not significant in the case of the rest of Europe. In the case of values, it is expected that these results are obtained due to the problematic variable of generalized trust; therefore there is probably no extreme difference between post-communist countries and the rest of Europe. However,

according to our results and hypotheses, in the case of GDP and Gini coefficient, this difference might be important.

Table 23: Interactions

	3.1 All interactions	3.2 Interaction Gini
History of communism	-1.08 (2.35)	-1.4 (0.5) **
Gini coefficient	-0.185 (0.01)	-0.02 (0.009)
History of communism*Gini	0.037 (0.017) *	0.038 (0.016) *
GDP (ln)	0.602 (0.15) ***	0.644 (0.088) ***
History of communism*GDP	-0.005 (0.195)	
Share of Protestants	0.672 (0.141) ***	0.622 (0.133) ***
Low Security Values	0.396 (0.22)	0.467 (0.18) *
History of communism* Low Security Values	0.519 (0.52)	
Intercept	-4.11	-4.56
Adjusted R^2	0.88	0.88
Number of cases	108	108

*p < 0.05; **p < 0.01; ***p < 0.001

As Model 3.1 shows, interactions between values and the history of a country as well as the interaction between GDP and the history of a country are not significant (even when tested separately, interactions one by one, values and GDP per capita were never significant). On the other hand, interaction with the Gini coefficient is significant and confirms the surprising results from the previous analysis. Is seems that income inequality and corruption influence each other very unexpectedly in the case of post-communist countries.

Finally, just to test these relations once again, and on much larger dataset, the analysis is run again, but without the variables values and trust taken from the ESS, as they have low coverage in time and space as discussed earlier.

Table 24: Determinants of corruption, larger dataset

	4.1. Simple regression	4.2 Interaction Gini
History of communism		-1.06 (0.29) ***
Gini coefficient	-0.006 (0.004)	-0.02 (0.007) ***
History of communism*Gini		0.019 (0.09) *
GDP (ln)	0.72 (0.19) ***	0.56 (0.03) ***
Share of Protestants	0.962 (0.082) ***	0.863 (0.083) ***
Intercept	-6.027	-3.76
Adjusted R^2	0.86	0.87
Number of cases	422	422

*p < 0.05; **p < 0.01; ***p < 0.001

As Table 24 shows, the results confirm the trends suggested by the previous analyses in this dissertation. A much larger dataset consisting of 422 country years shows with wider time and space coverage clearly the tendencies described above. It seems that income inequality does have a very different relation with Control of Corruption in post-communist countries and in countries without the history of communist rule. Interaction analysis shows the same results, again even when trying to interact also GDP, the results were not significant; the significance was the case only when Gini coefficient and communist history we interacted.

However, in order to confirm these results even strongly we can use multilevel methods. There might be a problem that a simple OLS regression on a pooled data does not take into account the different levels of the data and thus there is a danger that the results might be biased. As the dataset has panel nature – it observes the same countries over several years, it is crucial to strengthen and confirm the results in the OLS analysis also by panel analysis using multilevel methods.

4.2.3.3. Panel data analysis

In the next part, multilevel analysis is used to ascertain the influence of various variables on the Control of Corruption. Random effects and then fixed effects are used to observe the development within countries over time. The fixed effects model explores only the variation within countries over time. That means that fixed effects control for all the time-constant characteristics and explore the time-variant variables, which are hypothesised to influence the change in the dependent variable, this is also why the variable 'communist history' is missing in the fixed effects model – the fact whether country has or has not communist history does not change in time. On the other hand, random effects explore variation both within and between entities (in our case countries).

The advantage of fixed effects model is that it shows us the development of influences of variables over time within respective countries, it therefore can be observed which distinct variables are important in their development over time within countries. Random effects model takes into account variation not only within distinct countries over time but also explores variation among these countries.

Panel regression analysis in Table 25 again supports the results, which we could observe in previous simple regression analyses. Model 5.1 shows results of random effects and model 5.2 results of fixed effects. Number of observations is 108, number of countries in this analysis is 29, and there is a maximum of 5 observations per country (average is 3.7). Unfortunately, in this case, the fixed effects model is not significant overall, even though it seems that the development of values within country might have a certain effect on the Control of Corruption. The possible problem of fixed effects analysis is that the independent variables have very low change over time. Probably larger coverage in years in the future might show this relation as significant, however, on the other hand, the fact that values change very slowly might inhibit this development. Random effect model on the other hand, is significant and shows important information. As seen in most of the previous models, Gini coefficient and generalized trust are not important predictors in the case of Control of Corruption in Europe. Gini coefficient is problematic due to its different effects in the two observed groups – post-communist countries and the rest of Europe, and generalized trust is problematic probably due to its high correlation

with share of Protestants in a country. All the other variables are significant, which means that this model supports the hypotheses set in the theoretical section almost perfectly with the exception of Gini coefficient and generalized trust.

Table 25: Panel data analysis

	Model 5.1 Random effects	**Model 5.2 Fixed effects**
Ln GDP per capita	0.603 (0.09) ***	-0.008 (0.22)
Gini coefficient	-0.005 (0.005)	-0.004 (0.005)
Share of protestants	1.04 (0.27)***	0.754 (0.846)
Generalized trust	-0.09 (0.08)	-0.17 (0.092)
Security values	0.59 (0.21) **	0.56 (0.24) *
Intercept	-4.24	2.38
sigma_u	0.312	0.789
sigma_e	0.127	0.128
rho	0.856	0.974
Nb of observations	108	108
Nb of groups	29	29
F (Wald chi)	159.4	1.75
Prob>F	0.000	0.1335
corr(u_i, Xb)	0 (assumed)	0.4198

*p < 0.05; **p < 0.01; ***p < 0.001

Next model shows us the same analysis as in previous table, however, divided by the two country groups. Also, variable generalized trust is not included, due to the fact that there is low number of observations per group, the results will therefore be more correct with using less independent variables, and as the previous model showed, generalized trust would be hardly important predictor of Control of Corruption and it has multicollinearity problems. As Table 26 shows, the results again do not show any surprises. Model 6.1 shows the results for countries with no experience of communism, there are 72 observations consisting of 19 countries. Except for GDP per capita all the variables are significant and supporting the hypothesis.

Table 26: Panel data analysis by group

	Model 6.1 Democracies with no experience of communism	Model 6.2 Post-communist countries	Model 6.3 Interactions
Ln GDP per capita	0.411 (0.267)	0.464 (0.09) ***	0.386 (0.127) **
Communist history			-1.13 (0.407) **
Gini coefficient	-0.014 (0.007)*	0.01 (0.008)	-0.014 (0.006) *
Communist history*Gini			-0.02 (0.01)
Share of protestants	0.75 (0.28)**	2.81 (0.9) **	0.796 (0.24) **
Security values	0.54 (0.27) *	0.88 (0.33) **	0.55 (0.2) **
Intercept	-2.28	-3.89	-2.01
sigma_u	0.389	0.128	0.331
sigma_e	0.139	0.105	0.129
rho	0.887	0.599	0.867
Nb of observations	72	36	108
Nb of groups	19	10	29
F (Wald chi)	34.95	66.61	166.36
Prob>F	0.000	0.000	0.000
corr(u_i, Xb)	0 (assumed)	0 (assumed)	0 (assumed)

*p < 0.05; **p < 0.01; ***p < 0.001

Model 6.2 shows results for post-communist countries. However, as discussed above, there is a problem with country coverage of the ESS, out of possible 20 countries, only half is in this model (we saw that in the case of countries without the history of communism the country coverage problem is non-existent). However, the model is significant even with such a low number of observations. All the variables are significant except for Gini coefficient; however, this might be due to low country and time coverage. This can be tested again with including only variables, which have high country and time coverage – that is excluding data from the ESS. On one hand this means losing information, which would be pity especially in regard to values, but

on the other hand this means gaining information on the rest of variables in wider selection of countries and years. Finally, model 6.3 shows interactions between Gini coefficient and communist legacy, once again, the results clearly show that except for the Gini coefficient, all the other independent variables have an important effect on the Control of Corruption. Income inequality is non-significant, however it is on the borderline of significance, which suggests that an influence there still exists and it might be reached with stronger dataset.

As it was shown in the previous parts of the analysis, most of the results are very clear and in line with hypotheses. One exception is GDP per capita in the case of countries without the history of communism, which could be explained with very high level of GDP in these countries and non-linear effect of this influence. Second variable, which showed number of problems, is generalized trust. This variable is not important predictor especially in the case of post-communist countries, this might be explained by high inter group trust and moreover, by high multicollinearity with the variable share of Protestants. Finally, Gini coefficient is the biggest puzzle of these results. It seems that this is an enormous difference between post-communist countries and the rest of Europe. In the countries, which do not have the legacy of communism, Gini coefficient supports our hypothesis; higher inequality is associated with lower Control of Corruption. But, in the case of post-communist countries, this effect is reversed – higher inequality is associated with higher Control of Corruption. As there is no easy explanation of these results concerning income inequality, it is crucial to explore the relation between income inequality and Control of Corruption in the case of post-communist countries in more detail.

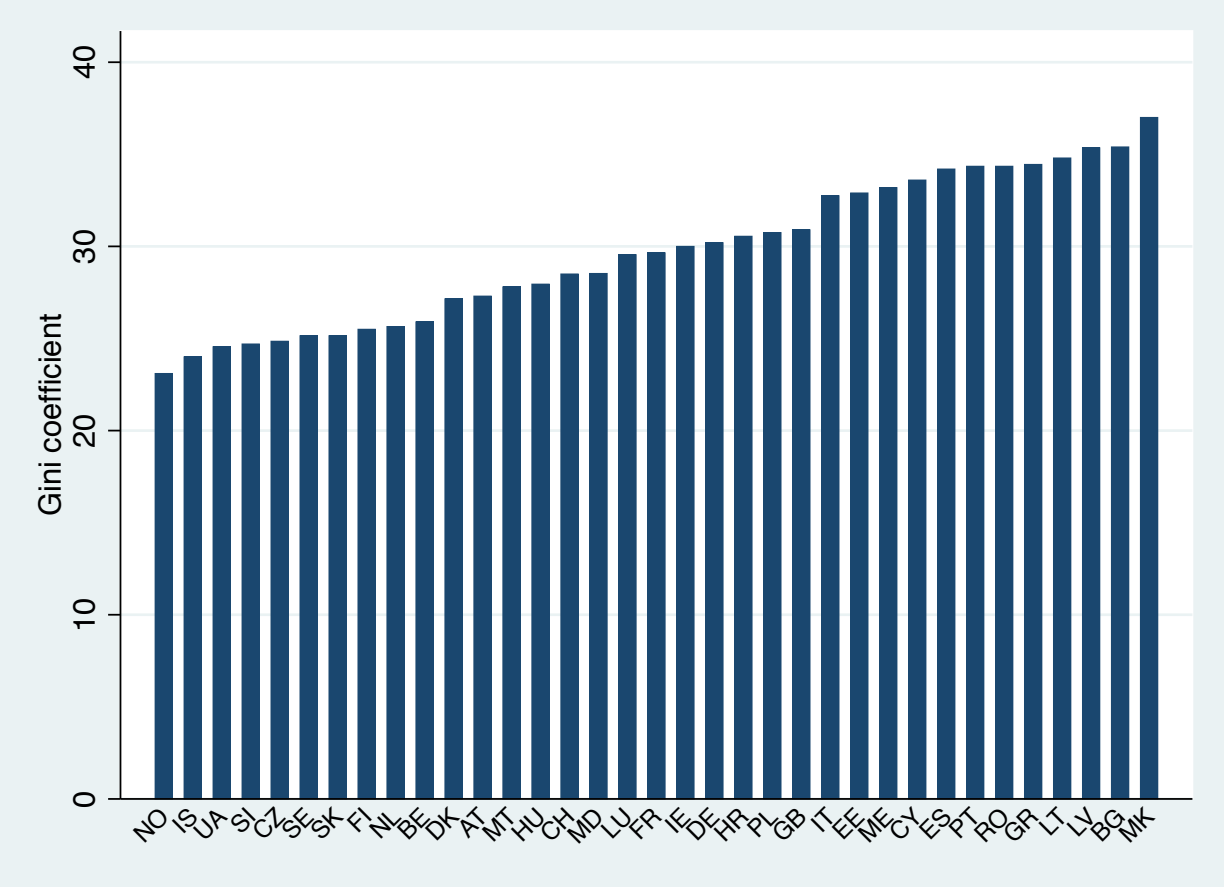
Next section scrutinizes the information on income inequality and analyses the possible explanations of these results.

4.2.3.4. Income inequality

Firstly, it is important to get a bigger picture of the development of the Gini coefficient in Europe in order to observe the differences between and within countries. Income inequality varies significantly among different European countries. Figure 25 shows these differences on the UNU-WIDER, Eurostat, and WB dataset measuring an average Gini coefficient in 2013-2014. One can

see that there is no clear division between post-communist countries and the rest of Europe, among the countries with average lowest inequality are post-communist countries (after NO and SI it is UA, SI, and CZ) and countries with the highest income inequality are also post-communist countries – MK, BG, and LV.

Figure 25: Income inequality

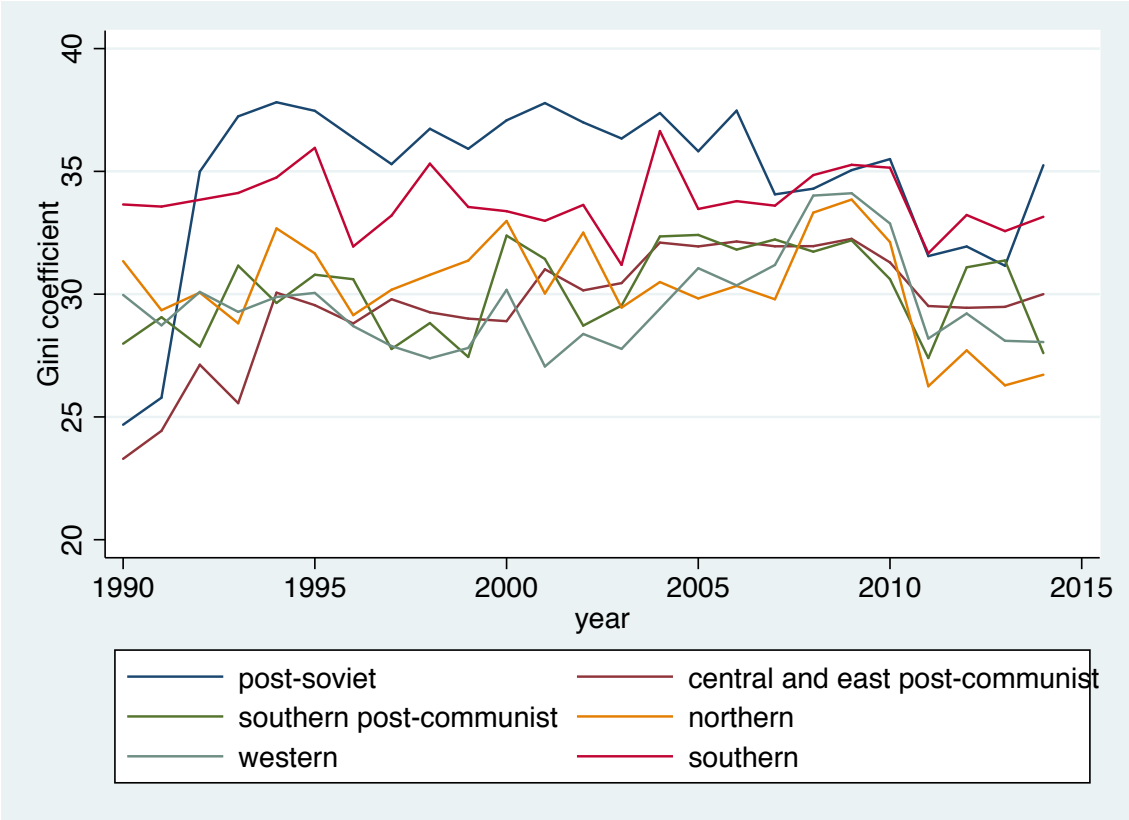


Source: UNU- WIDER, Eurostat, World Bank, average 2013-2014.

When we take a look at the development of the Gini coefficient over time, the data cover period 1990-2014, therefore from right after the fall of communism until today. For better clarity the data are divided into several sub regions according to the UN Statistics Division (United Nations, n.d.), however, graphs for each country separately can be found in the annex. We can see that income inequality has not changed very much over the years in countries, which have not

experienced communist rule, but in many post-communist countries, the change in income inequality took place. Uslaner (2008) claims that inequality is on the sharp rise in post-communist countries, however, Figure 26 and annexes show that this is true only for some regions and countries. It seems that the sharp rise took place right after the transition, but afterwards, income inequality remains steady. Even though there are some countries experiencing increase in Gini coefficient, such as MK, LV or RO, on the other hand, countries as SI, HU, RU, LT are without any significant changes, and finally, UA, MD or RS experience decline in income inequality.

Figure 26: Development of Gini coefficient 1990-2014



It seems that the relations between corruption and income inequality are not straightforward in the case of post-communist countries and more in-depth analysis might show the trends in development of corruption in connection to the income inequality in post-communist countries.

The dataset is divided into four waves (1995-1999, 2000-2004, 2005-2009, 2010-2014) in order to explore the development in time. Four regression models are fitted, each one for the different wave. The variables generalized trust and values are not included in order to have higher country and time coverage.

The equation for the models is then following:

$$\textbf{Control of Corruption}_i = \alpha_i + \beta\ \textbf{GDP per capita}_i + \gamma\ \textbf{Share of protestants}_i - \delta\ \textbf{Gini}_i - \zeta\ \textbf{communist history}_i + \varepsilon_i$$

Control of Corruption should be positively influenced by GDP per capita, share of Protestants, and negatively by Gini coefficient and the communist past.

Table 27 shows results of 4 waves. It is visible that there is a problem with the Gini coefficient in all waves. Interestingly, the fact of being a post-communist country is also not an important determinant of the Control of Corruption in neither of the waves, which suggests that there might be important differences within the group of post-communist countries.

Table 27: Regression analysis - Determinants of corruption

	7.1. 1995-1999	**7.2. 2000-2004**	**7.3. 2005-2009**	**7.4. 2010-2014**
GDP per capita (ln)	0.62 (0.149)***	0.59 (0.1)***	0.57 (0.1)***	0.644 (0.12)***
Gini coefficient	0.004 (0.02)	-0.01 (0.015)	-0.01 (0.016)	-0.02 (0.02)
Post-communist country	-0.504 (0.35)	-0.41 (0.216)	-0.395 (0.214)	-0.27 (0.242)
Share of Protestants	0.86 (0.32)*	0.92 (0.211)***	0.9 (0.25)***	0.85 (0.31)**
Intercept	-4.98	-4.44	-4.25	-5.008
Adjusted R^2	0.85	0.91	0.88	0.84
Number of cases	36	40	40	39

*p < 0.05; **p < 0.01; ***p < 0.001

To gain more information about the relations between corruption and the independent variables, it would be helpful to look at the effects altogether, not divided by time period. For this, panel data analysis will be used as the most appropriate method for this type of data. Fixed and random effects are used, however, Hausman test indicated random effects analysis more appropriate for these data; Table 28 therefore shows only the results of random effects. In this model, there are 40 countries and in total 422 observations, the lowest number of observations per group is 3 and highest is 12 (average number of observation per group is 10.6).

Table 28: Panel data- Determinants of corruption

	Model 8.1	**Model 8.2**
Ln GDP per capita	0.34 (0.05) ***	0.35 (0.05) ***
Gini coefficient	-0.03 (0.003)	-0.01 (0.004) **
Communist history	-0.867 (0.151) ***	-1.511 (0.259) ***
Communist history*Gini coeff.		0.02 (0.007) **
Share of protestants	1.08 (0.208) ***	1.01 (0.21)**
Intercept	-2.09	-1.86
sigma_u	0.341	0.344
sigma_e	0.182	0.179
rho	0.788	0.785
Nb of observations	422	422
Nb of groups	40	40
F (Wald chi)	346.38	351.21
Prob>F	0.000	0.000
corr(u_i, Xb)	0 (assumed)	0 (assumed)

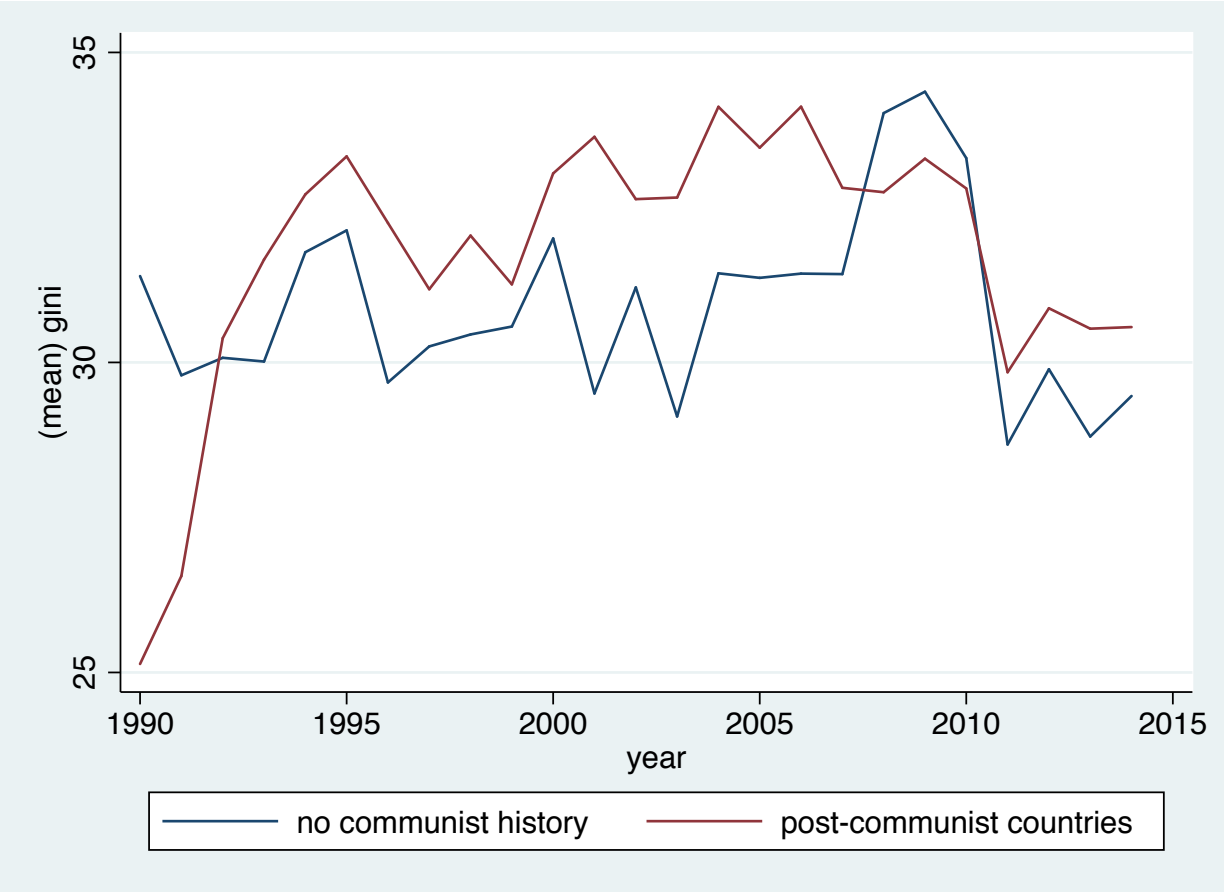
*p < 0.05; **p < 0.01; ***p < 0.001

As model 8.1 in Table 28 shows, the results confirm almost perfectly the findings of above-mentioned authors analysing the relations between corruption and different variables with one exception; Gini coefficient is not significant predictor of the Control of Corruption. In order to explore what is behind these results, interaction between Gini coefficient and being a post-communist country is included, the results can be seen under Model 8.2. Theories suggest that more equality should be connected to less corruption. However, as we see in the case of post-communist countries, the relationship is the reverse, i.e. in countries with more equality, there is more corruption.

Taking into account Uslaner's (Uslaner, 2009) claim, that even though in post-communist countries inequality is low, Gini coefficient is quickly raising, which influences corruption, we should be able to see movement in Gini coefficient and analogical, movements in the Control of Corruption. And with the first look at Figure 27 it seems that Uslaner (2009) is correct, in fact, the average Gini coefficient in post-communist countries rose very sharply and caught up with the Gini coefficient in European countries with no communist history in the early 90s. On average,

the difference in the Gini coefficient between post-communist countries and the rest of Europe is not big, in fact, the Gini coefficient in post-communist countries is higher than in the rest of Europe with the exception of the financial crisis years. However, as discussed before, it seems that each post-communist country has a different path concerning income inequality, in some countries, income inequality is rising, however, while in other it remains constant or it is even decreasing. Therefore, if we were to believe Uslaner, we would expect corruption to increase or decrease according to the Gini coefficient.

Figure 27: Development of Gini coefficient in Europe

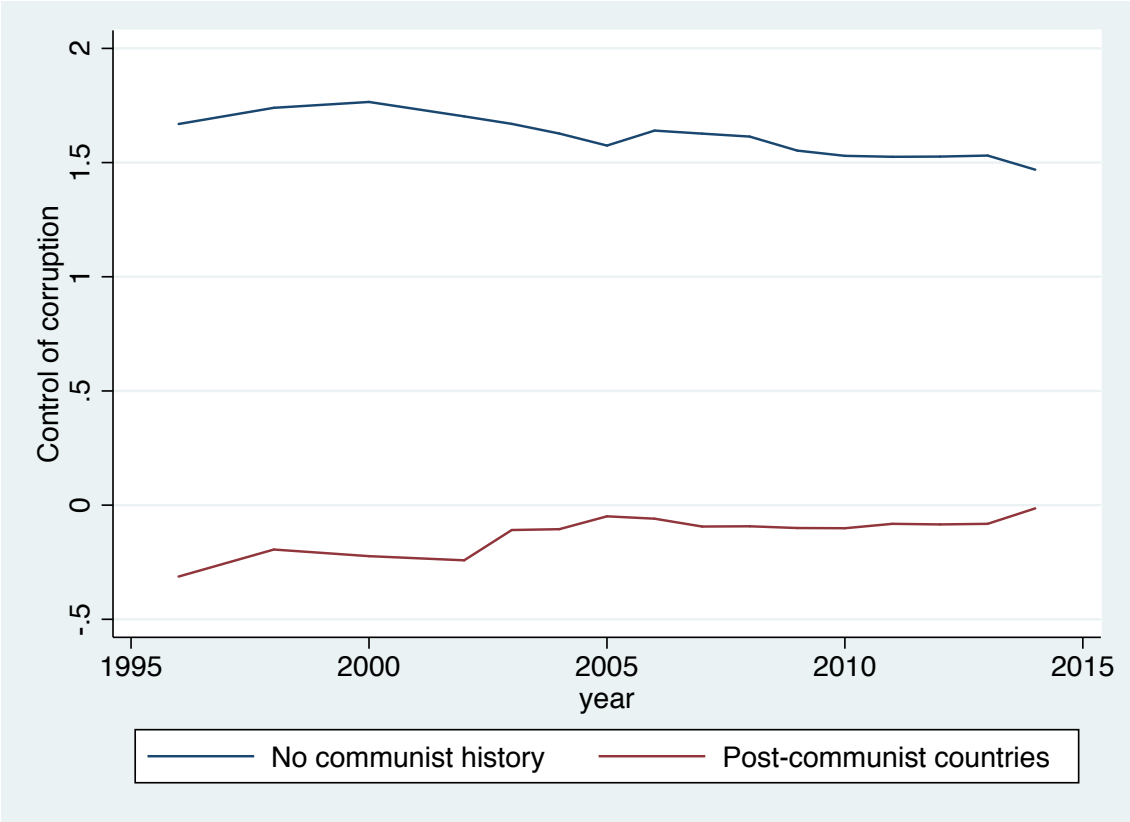


Source: WB, Gini coefficient

As this theory expects that the Control of Corruption would not change in time, it is essential to check the development of Control of Corruption of post-communist countries in time as opposed to countries with no history of communist rule. Figure 28 shows that the Control of Corruption

has not changed very much over the years, there is still a very big gap between countries which have experienced communist rule and the rest of European countries. This gap is very slowly closing over the years, however, the improvement of post-communist countries as a group is very small. It is worth noting that European countries without the history of communism are very slowly decreasing in their Control of Corruption over the years. Of course, this graph shows only the development of Control of Corruption in countries as groups, it is very likely that there is high variability within the countries (for the graphs by country please see annex).

Figure 28: Control of Corruption, development in time

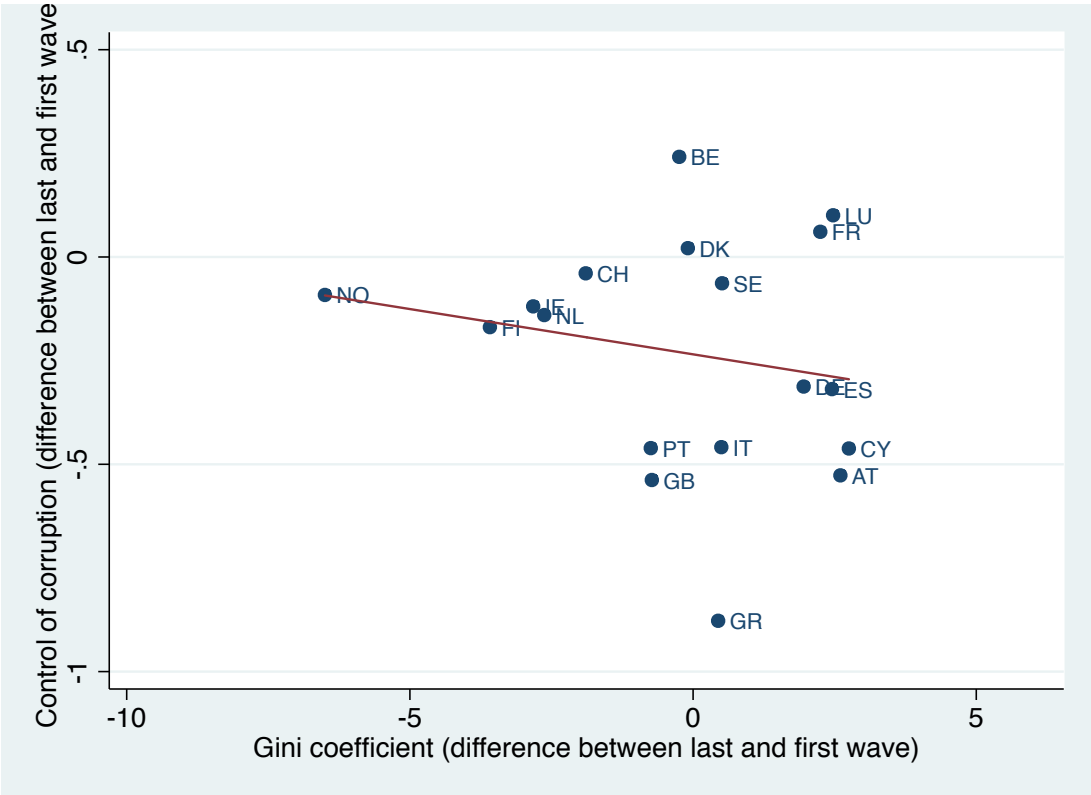


Source: Control of Corruption, WB

If the hypothesis that inequality influences corruption (or vice versa) is correct, we should be able to see a movement in corruption in those countries, where Gini coefficient changed its value. For this reason it is essential to look at the changes in Gini coefficient and corruption over years within the groups of countries. Following graphs show the correlations between the change

of Gini coefficient (2010-2014 vs. 1995-2000) and change of Control of Corruption (2010-2014 vs. 1995-2000). Figure 29 shows the relations between Control of Corruption and Gini coefficient in European countries without the legacy of communism, there is negative correlation meaning that lower income inequality is associated with higher Control of Corruption. The relation is not very strong; correlation is on the level of -0.1964.

Figure 29: Countries without communist legacy; Control of Corruption vs. Gini coefficient, differences between (2010-2014 vs. 1995-2000)

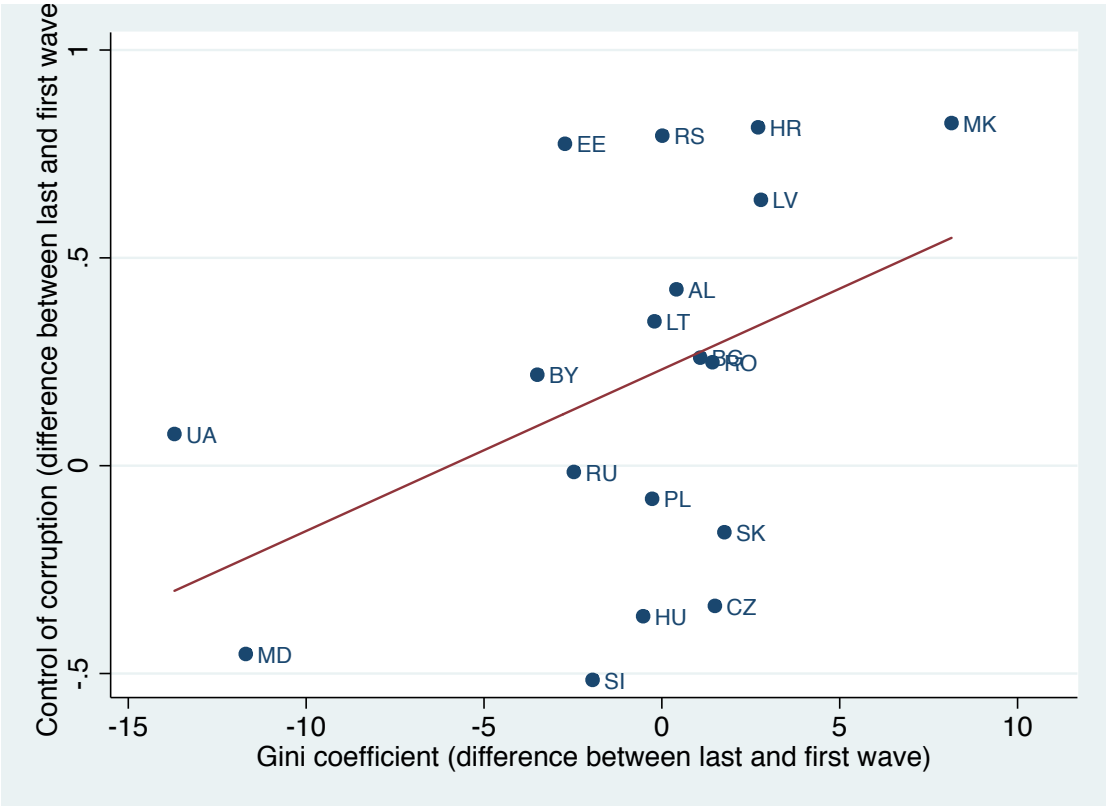


Source: WB, Control of Corruption and Gini coefficient

Figure 30 on the other hand shows relations between Gini coefficient and Control of Corruption in post-communist countries, the correlation in this case is much stronger (0.4279) and moreover, positive, it has the opposite direction than in the case of countries without the history of communism. It seems that the bigger the change toward more unequal society, the bigger the change also towards less corrupt society. These results go against the theories explaining corruption. This relationship remains very strong even when deleting from the analysis the

countries, which are the strongest drivers of this relationship, such as MD or MK. Moreover, when we take into account not the same time frame as in the case of Control of Corruption, but the wave preceding this (1990-1995), the relationship is less strong (0.3435), but still positive.

Figure 30: Post-communist countries; Control of Corruption vs. Gini coefficient, differences between (2010-2014 vs. 1995-2000)



Source: WB, Control of Corruption and Gini coefficient

In light of these findings, it would be plausible to adjust the equation explaining corruption and to take a look at the effect of Gini coefficient in the first wave and whether it influences the current Control of Corruption. As the Gini coefficient would precede the Control of Corruption, we can get a hint of causality. However, of course, we cannot definitely conclude the causal effect as income inequality could in theory influence corruption on a longer run than only during a time span of twenty years.

The updated equation looks as following:

$$\textbf{Control of Corruption}_i = \alpha_i + \beta\ \textbf{GDP per capita}_{it} + \gamma\ \textbf{Share of protestants}_{it} - \delta\ \textbf{Gini}_{it-3} - \zeta\ \textbf{communist history}_i + \varepsilon_i$$

Table 29 shows results of the regression analysis; there is no need for panel data analysis as we are using the effect of Gini in the first wave (1995-2000) on the Control of Corruption in the latest wave (2010-2015).

Table 29: Regression analysis – Determinants of corruption, Gini t-3

	4.1.	**4.2.**
Ln GDP per capita	0.62 (0.146) ***	0.613* (0.14)
Gini coefficient, t-3	-0.013 (0.02)	-0.07* (0.034)
Post-communist country	-0.286 (0.276)	-2.71*(1.22)
Communist history*Gini coeff., t-3		0.79* (0.039)
Share of Protestants	1.12 (0.32) **	0.938* (0.314)
Intercept	-4.87	-3.37
Adjusted R^2	0.84	0.86
Number of cases	37	37

*p < 0.05; **p < 0.01; ***p < 0.001

Unsurprisingly, given the previous analysis, the two models show the same effects as before concerning income inequality. Model 4.1 shows that income inequality in the past, but also being post-communist country, does not have a significant effect on the Control of Corruption. However, as model 4.2 shows, including interaction between income inequality and being post-communist country, change the results. In fact, Gini coefficient in interaction is positive but on the border of significance showing that the possibility of causality is probably problematic.

Finally, we can take into account the biggest outliers – meaning countries with highest change in the Control of Corruption and observe the development of the Gini coefficient in these specific countries. As Table 30 shows, the biggest difference between the first year of Control of Corruption (1996) and last year (2014) have MD, SI, LV, and EE, whereas SI and MD have the most significant decrease and LV and EE increase in Control of Corruption.

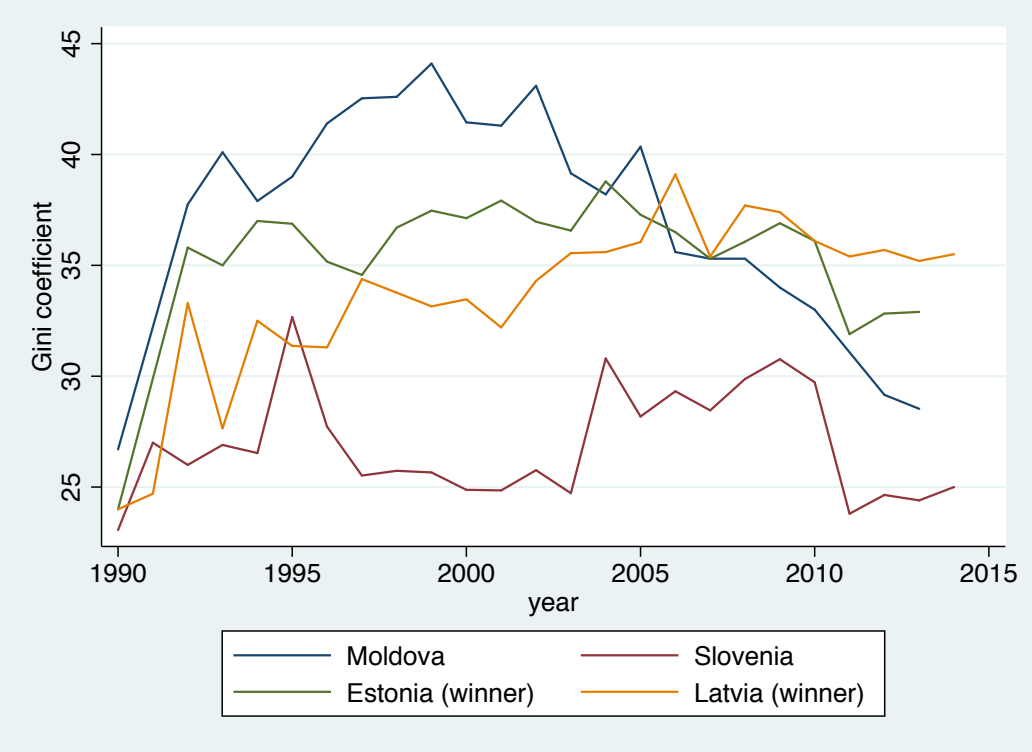
Table 30: Control of Corruption – 2014-1996

Country	Difference
MD	-0.641142
SI	-0.6280062
HU	-0.4475964
CZ	-0.3285571
SK	-0.2391126
UA	0.0368057
PL	0.050208
BA	0.0676096
RO	0.0836865
BG	0.4918745
AL	0.5380899
LT	0.5388787
BY	0.610175
RS	0.8366632
HR	1.004934
MK	1.056303
LV	1.159087
EE	1.327681

Source: World Bank – Control of Corruption

As Figure 31 shows, the biggest outliers only support the results we obtained so far. The winners of the race into low corruption – Latvia and Estonia – have both quite high Gini coefficients, therefore high income inequality. With the exception of the very first years after the fall of the iron curtain, when the Gini coefficient increased very quickly, there were not very significant changes in the income inequality. Latvia's Gini coefficient is slightly increasing and Estonia's decreasing. On the other hand, the Gini coefficient of Moldova and Slovenia is very low, especially in the case of Slovenia.

Figure 31: Winners and losers of Control of Corruption



These results show that indeed, in the case of post-communist countries, the Gini coefficient has very opposite influence on the Control of Corruption than expected based on theories and also on the results on a global and European scale.

4.2.4. Discussion

The quantitative analysis showed that the reality in European countries do not support all the hypotheses on the global level. In fact, most cultural variables do support our hypotheses whereas economic variables do not. To be clear the hypotheses will be presented one by one as following:

H1: Control of Corruption will be higher in countries with lower income inequalities

H1a: In post-communist countries this relation will be weaker or non-existent

Out analysis does not support the hypothesis H1, the models on European level showed that income inequality is not an important predictor. However, a deeper analysis uncovered that in fact, the relation is strong and supportive of our H1 hypothesis but only in the case of countries

without the legacy of communism. In post-communist countries, the relation is also significant, however, with the opposite direction – lower inequality is associated with lower Control of Corruption; therefore the relation is even stronger than our H1a hypothesis expects. This relation in not weaker or non-existent, but, most surprisingly, the opposite.

H2: Control of Corruption will be higher in countries with higher GDP per capita

H2a: In post-communist countries this relation will be stronger than in the rest of Europe

The results of the analysis do support hypothesis H2 but also H2a, it seems that the relation is non-linear therefore after certain level of GDP per capita, the association with Control of Corruption loses its strength, therefore in post-communist countries, due to the fact that their GDP per capita is in general lower than in rest of Europe, the relation is stronger.

H3: Control of Corruption will be higher in countries with a higher share of Protestants

H3a: In post-communist countries this relation will be similar as in the rest of Europe

The analysis supports both of the hypotheses; share of Protestants in a country is indeed a very important predictor of Control of Corruption in post-communist countries and in the rest of Europe as well.

H4: Control of Corruption will be higher in countries with higher generalized trust

H4a: In post-communist countries this relation will be weaker

Our analysis does not support neither of these hypotheses because of the reason that generalised trust is highly correlated with share of Protestants in a country and showed problems with multicollinearity in the models. For this reason the results are not reliable.

H5: Control of Corruption will be higher in countries with lower security values

H5a: In post-communist countries this relation will be similar as in the rest of Europe

The analysis supports both of the hypotheses; security values are indeed an important predictor of Control of Corruption both in post-communist countries and in the rest of Europe.

5. CONCLUSION

This dissertation considers theories explaining corruption and tests them on the European level. The region of Europe was selected because of several reasons; first, there exist wide range of trustworthy data that describe Europe since early 1990s. Secondly, in general, there is a risk of different cultural understandings of corruption, therefore selecting only one region, albeit a large one, can help avoiding this problem; Europe seems to be a very good candidate for this choice as on one hand the different countries share relatively similar culture thus there is high probability that corruption is understood similarly, and on the other hand, Europe is quite variable therefore there can be important differences among the different reasons for corruption. Third, Europe is a very good candidate for this case study because half of the European countries underwent the transition to democracy from communism only recently, at a time, when the data were already collected, therefore the transition and its effect on corruption can be observed.

However, it is extremely important to note that there is a crucial problem with measuring corruption. As corruption is clandestine activity, there is no official statistics measuring corruption. Therefore corruption can only be measured by proxies, which can measure perception of corruption or experience or try to grasp corruption with harder data. Unfortunately, as it is not possible to ascertain whether these measurements are correct, it is therefore crucial to try to select measure which is of the highest quality. For this reason the author analysed the most used measures of corruption which exist today and with the help of quantitative and qualitative assessment chose indicator which seems to be the best one of the selection of indicators. Specifically, there are three generations of indicators, first measures perceptions of corruption with the help of various methods, such as expert assessment or polls and brings these perceptions together into one composite indicator. Second generation indicators rely on public opinion polls, they survey people on their perception of corruption and on their experience with corruption. In addition to public, second generation polls include also firm surveys. Finally, third generation indicators try to rely on 'hard' data and observe real corruption. Among these indicators one can include various research papers, for example the Golden & Picci article observing the difference between the existing infrastructure and the money allocated for infrastructure construction in Italy (Golden & Picci, 2005). Each of these three generations of indicators has advantages and

disadvantages and none of them is perfect for the analysis, however, after detailed analysis the author came into a conclusion that the first generation indicator – the Control of Corruption by the World Bank is the best indicator for the purpose of this dissertation.

The author had two main research questions:

Is there a difference in the level of corruption and in the links between corruption and other variables between post-communist countries and the rest of European countries?

What are the reasons behind these differences (if there are any)? Is there any pattern in the development of corruption?

These research questions could be translated into hypotheses, which were based on a literature review and derived from the previous quantitative analyses on the global scale. The author had five hypothesis based on the theoretical part of this dissertation. The hypotheses focused on different structural and cultural factors, which were observed by previous researchers to influence the levels of corruption in a country, however, there is no causal assumption, it is not clear whether these variables have a causal effect on corruption or whether corruption has causal effect on these variables. It is also important to note that these hypotheses were not focused on the individual and the factors, which can influence his/her decision in participating in corruption, but observed the variables on the macro scale – on the level of country. The hypotheses looking at economic factors were three – one focusing on GDP per capita, second on income inequality and third on institutions. According to previous research on a global scale, higher GDP per capita is associated with higher Control of Corruption. Income inequality measured by Gini coefficient also seems to have and influence on the Control of Corruption – higher income inequality is associated with lower levels of Control of Corruption. Finally, the nature of how institutions work in a country might influence the level of corruption, more specifically; a system, which is open to all groups in the society and not exclusively to elites, can lower corruption. However, as the indicator measuring the institutions by Mungiu-Pippidi (2015b) uses Control of Corruption, as one of the basis of its development, this indicator cannot be used in this analysis as the dependent variable is Control of Corruption as well. Cultural factor included into this analysis were three – share of Protestants in a country, generalized trust measured as trust among people, and security values. Higher share of Protestants is in general associated with higher Control of

Corruption. This might be due to the reason that Protestant religion is more individualistic than Catholic, Orthodox or Islam. More hierarchical religions and stronger ties among the members of a community might enable favours to the other members of the group and consequently corruption and bribery in a country. Next cultural variable, which is hypothesised to influence corruption, is generalised trust; higher trust towards other people is associated with lower corruption. As mentioned above, it is not clear whether higher trust leads to corruption free environment or whether low corruption leads to higher trust among people. Finally, last cultural variable are values. There is a hypothesis that certain values are associated with higher levels of corruption. Specifically, these values are those, which are connected with stronger emphasis on security, traditional values and family. These hypotheses were tested on European level and then a special focus was on the analysis of differences between post-communist European countries and the rest of Europe. As the research questions show, the aim was to find out whether these theories hold on the European level and if yes, whether there are any differences between the relations among various variables and corruption in post-communist countries and the rest of Europe.

The author chose several methods for answering the research questions and hypothesis. In addition to descriptive analysis, OLS regression and multilevel models were used. OLS regression was used to analyse different time periods and polled data, and multilevel models then showed whether the OLS regressions results were valid as multilevel methods can distinguish also time and country level. Interestingly, all the methods and analyses showed common trends in corruption in Europe.

The analysis showed that the legacy of communism is still an important factor in the today's reality of post-communist countries and this might be the case for many years to come. However, on the other hand, one can see that over time the differences within post-communist countries are getting bigger. Some countries are losers, such as Moldova and some are winners, such as Estonia. Some countries are therefore much more successful in leaving behind the past and improving their governance but other lag behind. Moreover, interestingly, there is also an increasingly bigger difference in the level of corruption among countries, which have never experienced communist rule. Southern countries as Greece, Cyprus, Italy or Spain are more and more lagging behind the rest of European countries. It might be the case that in the future years,

the concept of east and west will not be relevant anymore and the main differences will be between north and south European countries, regardless of the communist past.

The analysis then showed that European countries do not correspond to all the theories, which work on the global level. There are only two variables, which are consistent with the research on the post-communist countries, and those are security values and the share of Protestants in a country. Generalised trust appeared to be problematic for the analysis as it is highly correlated with share of Protestants in a country and resulted in problems with multicollinearity. Finally, GDP per capita and income inequality did not support the hypotheses, however, each of them in different sub region. GDP per capita turned out not to be an important predictor of Control of Corruption in case of countries without the legacy of communism. However, more detailed analysis showed that this is most likely due to the fact that the relation between corruption and GDP per capita is not linear. It seems that after reaching certain point of wealth, the increase of Control of Corruption slows and stops; after certain point of GDP per capita, Control of Corruption does not increase any more. Since many of the countries without the history of communism have very high GDP per capita, the relation between GDP and Control of Corruption is much weaker than in the case of post-communist countries where the GDP per capita is in general much lower. Finally, the analysis showed that the results on the European level do not support the theory that high income inequality increases corruption, on the contrary, analysis showed that in the case of post-communist countries, high income inequality actually decreases corruption in contrast to the rest of Europe. This is supported by three types of analysis; firstly, by analysing the relations between Control of Corruption and Gini coefficient by time-waves since 1995, then by multilevel analysis, and finally by analysing the change in these two indicators from 1995 to 2014.

There are be more explanations to these effects; one of them is supported by Uslaner (2009) who claims that even though post-communist countries have low income inequality while having high corruption due to the rule of communism, this relationship will reverse quickly after post-communist countries catch up in income inequality with the rest of European countries. However, the analysis shows that this claim is not supported by the development of corruption in Europe. It is true that post-communist countries as a group quickly caught up with income inequality levels of the European countries which did not experience communism, but analysis of

changes within the group of post-communist countries actually shows a contrary effect. Countries, which have had the highest change in income inequality towards more unequal societies, are today the least corrupt countries among post-communist countries and vice versa.

This dissertation therefore showed that some variables, which were hypothesised and tested as variables influencing corruption on the global level, hold the hypotheses but others do not. It seems that the situation is still different in post-communist countries and in the rest of Europe. This difference is not in the case of cultural variables; in fact, cultural variables are successful in predicting the level of corruption on European level, regardless of the sub regions. Economic variables, on the other hand, tell a different story, GDP per capita and income inequality has a very different influence on the Control of Corruption in the case of post-communist countries and the rest of Europe.

However, as the time period for which there currently exist data is only 20 years long, researchers will have to wait for longer time series to assess whether the results presented by this dissertation hold. It is therefore crucial, due to the unexpected results of this analysis in the case of income inequality, to treat post-communist countries in models including corruption and income inequality with caution, as this group behaves significantly differently than the rest of European countries and also differently from the results on a global level.

6. BIBLIOGRAPHY

Acemoglu, D., & Robinson, J. A. (2008). *The Role of Institutions in Growth and Development* (No. Working paper n. 10) (pp. 1–44). The World Bank.

Adsera, A., Boix, C., & Payne, M. (2003). Are You Being Served? Political Accountability and Quality of Government. *Journal of Law, Economics, & Organization*, *19*(2), 445–490. http://doi.org/10.1093/jleo/ewg017

Aidt, T. S. (2003). Economic analysis of corruption: A survey. *The Economic Journal*, *113*, 1–24.

Amore, M. D., & Bennedsen, M. (2013). Journal of Financial Economics. *Journal of Financial Economics*, *110*(2), 387–402. http://doi.org/10.1016/j.jfineco.2013.06.002

Arezki, R., & Bruckner, M. (2009). *Oil Rents, Corruption, and State Stability: Evidence From Panel Data Regressions* (No. WP/09/267) (pp. 1–29). IMF.

Aumann, R. J., & Dreze, J. H. (2005). When All is Said and Done, How Should You Play and What Should You Expect? *Université Catholique De Louvain, Center for Operations Research and Econometrics (CORE)*, 1–32.

Banfield, E. C. (1958). The moral basis of a backward society. New York: Free Press.

Bădescu, G. (2003). Social trust and democratization in the post-communist societies. In *Social Capital and the Transition to Democracy* (pp. 120–140). London and New York: Routledge.

Bendor, J., & Swistak, P. (2001). The Evolution of Norms. *American Journal of Sociology*, *106*(6), 1493–1545. http://doi.org/10.1086/321298

Bjornskov, C., & Paldam, M. (2005). Corruption trends. In J. G. Lambsdorff, M. Taube, & M. Schramm (Eds.), *The new institutional economics of corruption*. Abingdon: Routledge.

Blake, C. H., & Martin, C. G. (2006). The dynamics of political corruption: Re-examining the influence of democracy. *Democratization*, *13*(1), 1–14. http://doi.org/10.1080/13510340500378191

Brown, D. S., Touchton, M., & Whitford, A. (2011). Political Polarization as a Constraint on Corruption: A Cross-national Comparison. *World Development*, *39*(9), 1516–1529. http://doi.org/10.1016/j.worlddev.2011.02.006

Bukovansky, M. (2006). The hollowness of anti-corruption discourse. *Review of International*

Political Economy, *13*(2), 181–209. http://doi.org/10.1080/09692290600625413

Cameron, L., Chaudhuri, A., Erkal, N., & Gangadharan, L. (2005). *Do Attitudes Towards Corruption Differ Across Cultures? Experimental Evidence from Australia, India, Indonesia and Singapore* (pp. 1–49). DEAS Working Paper Series from RePEc.

Charron, N., & Rothstein, B. (2014). *Social trust, quality of government and ethnic diversity* (No. WORKING PAPER SERIES 2014:20) (pp. 1–31). QOG THE QUALITY OF GOVERNMENT INSTITUTE.

Charron, N., Lapuente, V., & Rothstein, B. (2013). Quality of Government and Corruption from a European Perspective: A Comparative Study of Good Government in EU Regions. Northampton: Edward Elgar Publishing.

Coviello, D., & Gagliarducci, S. (2010). *Building political collusion: Evidence from procurement auctions* (pp. 1–46). Institute for the Study of Labor.

Cupit, G. (2000). *When Does Justice Require Impartiality?* (No. UK 50th Annual Conference). London: Political Studies Association.

Dahl, R. A., & Lindblom, C. E. (1992). Politics, economics and welfare. New Brunswick: Transaction Publishers.

Donchev, D., & Ujhelyi, G. (2014). What Do Corruption Indices Measure? *Economics & Politics*, *26*(2), 309–331.

Drury, C. A., Krieckhaus, J., & Lusztig, M. (2006). Corruption, Democracy, and Economic Growth. *International Political Science Review/ Revue Internationale De Science Politique*, *27*(2), 121–136. http://doi.org/10.1177/0192512106061423

EBRD. (2006). *Business environment and enterprise performance survey (BEEPS)* (pp. 1–34). WB.

EBRD. (2010). *The Business Environment and Enterprise Performance Survey (BEEPS)* (pp. 1–276). WB.

EBRD. (2015). *The business environment in the transition region* (pp. 1–42).

Eisenhardt, K. M. (1989). Agency Theory: An Assessment and Review. *Academy of Management Review*, *14*(1), 57–74.

European Commission. (2014). *Corruption* (No. 397) (pp. 1–230). EC.

Fazekas, M., Toth, I. J., & King, L. P. (2013). *Anatomy of grand corruption: A composite corruption risk index based on objective data* (No. CRC-WP/2013:02) (pp. 1–46). Budapest:

Corruption Research Center Budapest.

Fisman, R., & Miguel, E. (2007). Corruption, Norms, and Legal Enforcement: Evidence from Diplomatic Parking Tickets. *Journal of Political Economy*, *115*, 1020–1048.

Flatters, F., & Macleod, W. B. (1995). Administrative Corruption and Taxation. *Internationa Tax and Public Finance*, *2*, 397–417.

Frič, P. (1999). Korupce na český způsob. Praha: G plus G.

Friedrich, C. J. (1966). Political Pathology. *The Political Quarterly*, *37*(1), 70–85.

Golden, M. A., & Picci, L. (2005). Proposal for a New Measure of Corruption, illustrated with Italian data. *Economics & Politics*, *17*(1), 37–75.

Goldman, E., Rocholl, J., & So, J. (2013). Politically Connected Boards of Directors and The Allocation of Procurement Contracts. *Review of Finance*, *17*(5), 1617–1648. http://doi.org/10.1093/rof/rfs039

Graycar, A., & Smith, R. G. (2011). Handbook of Global Research and Practice in Corruption (pp. 1–54). Northampton: Edward Elgar Publishing.

Gupta, S., Davoodi, H., & Alonso-Terme, R. (2002). Does corruption affect income inequality and poverty? *Economics of Governance*, *3*, 23–45.

Heidenheimer, A. J., & Johnson, M. (2002). Political Corruption - Concepts and Contexts. New Brunswick: Transaction Publishers.

Heidenheimer, A. J., Johnson, M., & Levine, V. T. (1989). Political Corruption: A Handbook. London: Transaction Publishers.

Heinrich, F., & Hodess, R. (2011). Measuring corruption. In A. Graycar & R. G. Smith (Eds.), *Handbook of Global Research and Practice in Corruption*. Northampton: Edward Elgar Publishing.

Held, M., Muller, J., Deutsch, F., Grzechnik, E., & Welzel, C. (2009). Value Structure and Dimensions. *World Values Research*, *2*, 1–22. Retrieved from http://www.worldvaluessurvey.org/AJPublications.jsp?CndPUTYPE=1&PUID=96

Helliwell, J. F. (2006). Well-being, social capital and public policy: What's new? *The Economic Journal*, *116*, C34–C45.

Heywood, P. (1997). Political Corruption: Problems and Perspectives. *Political Studies*, *45*, 417–435.

Holmes, L. (1993). The end of communist power: Anti-corruption campaigns and legitimation

crisis. Carlton: Melbourne University Press.

Holmes, L. (1997). Corruption and the crisis of the post-communist state. *Crime, Law & Social Change*, *27*, 275–297.

Holmes, L. (2006). *Rotten states?: Corruption, Post-Communism, and Neoliberalism*. Durham: Duke University Press.

Huntington, S. P. (1968). Political Order in Changing Societies (pp. 1–85). New Haven and London: Yale University Press.

Husted, B. W. (1999). Wealth, Culture, and Corruption. *Journal of International Business Studies*, *30*(2), 339–359.

Inglehart, R. F. (1997). *Modernization and postmodernization: cultural, economic, and political change in 43 societies*. Princeton: Princeton University Press.

Johnson, M. (2005). Syndromes of Corruption: Wealth, Power, and Democracy. Cambridge: Cambridge University Press.

Kapoor, M., & Ravi, S. (2012). Determinants of Corruption: Government Effectiveness vs. Cultural Norms. *The B.E. Journal of Economic Analysis & Policy*, *12*(1). http://doi.org/10.1515/1935-1682.3049

Karklins, R. (2005). The system made me do it : corruption in post-communist societies. Armonk, NY ; London: M.E. Sharpe.

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2004). *Governance Matters III: Governance Indicators for 1996-2002* (pp. 1–59). The World Bank.

Kaufmann, D., Kraay, A., & Zoido-Lobatón, P. (1999). *Governance Matters* (No. 2196). WB.

Kaufmann, D., Kraay, A., Lora, E., & Pritchett, L. (2002). Growth without Governance. *Economía*, *3*(1), 169–229.

Kaufmann, D., Mastruzzi, M., & Kraay, A. (2010). *The Worldwide Governance Indicators: Methodology and Analytical Issues* (pp. 1–30). The World Bank.

Klitgaard, R. (1988). Controlling Corruption. Berkeley: University of california Press.

Knack, S. (2006). *Measuring Corruption in Eastern Europe and Central Asia: A Critique of the Cross-Country Indicators* (No. 3968) (pp. 1–64). The World Bank.

Kornai, J., & Rose-Ackerman, S. (Eds.). (2004). *Building a trustworthy state in post-socialist transition*. New York: Palgrave Macmillan.

Kostadinova, T. (2012). Political Corruption in Eastern Europe: Politics After Communism.

Colorado: Lenne Rienner Publishers.

Kramer, J. M. (1977). Political Corruption in the U.S.S.R. *Western Political Quarterly*, *30*(2), 213–224.

Kurer, O. (2005). Corruption: An Alternative Approach to Its Definition and Measurement. *Political Studies*, *53*, 222–239.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1999). The Quality of Government. *Journal of Law, Economics, & Organization*, *15*(1), 222–279.

Lambsdorff, J. G. (2001). *Background Paper to the 2001 Corruption Perception Index* (pp. 1–11). Transparency International.

Lambsdorff, J. G. (2002). What nurtures corrupt deals? On the role of confidence and transaction costs. In D. della Porta & S. Rose-Ackerman (Eds.), *Corrupt Exchanges*. Baden-Baden.

Lambsdorff, J. G. (2003). How Corruption Affects Productivity. *Kyklos*, *56*(4), 457–474.

Lambsdorff, J. G. (2007). *The Methodology of the Corruption Perceptions Index 2007* (pp. 1–15).

Li, H., Xu, L. C., & Zou, H.-F. (2000). Corruption, Income Distribution, and Growth. *Economics & Politics*, *12*(2), 155–182.

Lomborg, B. (Ed.). (2004). Global crises, global solutions. Cambridge: Cambridge University Press.

Lui, F. T. (1985). An Equilibrium Queuing Model of Bribery. *Journal of Political Economy*, *93*(4), 760–781.

Malito, D. V. (2014). *Measuring Corruption Indicators and Indices* (No. 13) (pp. 1–34). EUI working papers.

Mauro, P. (1995). Corruption and growth. *The Quarterly Journal of Economics*, *110*(3), 681–712.

Miller, W. L., Grodeland, A. B., & Koshechkina, T. Y. (2001). A culture of corruption? : coping with government in post-communist Europe. Budapest, NY: CEU Press.

Mungiu-Pippidi, A. (2015a). *Public Integrity and Trust in Europe* (pp. 1–59). Berlin: European Research Centre for Anti-Corruption and State-Building (ERCAS).

Mungiu-Pippidi, A. (2015b). The Quest for Good Governance: How Societies Develop Control of Corruption. Cambridge: Cambridge University Press.

Mungiu-Pippidi, A. (2016). Learning from virtuous circles. *Journal of Democracy*, *27*(1), 1–16.

Mungiu-Pippidi, A., & Dadasov, R. (2015). *A note on What causes change in governance and How to measure public integrity* (pp. 1–7). Hertie School of Governance.

Norris, P. (2001). Making Democracies Work: Social Capital and Civic Engagement in 47 Societies. Presented at the European Science Foundation EURESCO Conference on Social Capital: Interdisciplinary Perspectives at the University of Exeter.

North, D. C., Wallis, J. J., & Weingast, B. R. (2006). *A Conceptual Framework for Interpreting Recorded Human History* (No. Working paper 12795) (pp. 1–80). National Bureau of economic research.

Nye, J. S. (1967). Corruption and Political Development. *The American Political Science Review*, *6*, 417–427.

O'Connor, S., & Fischer, R. (2011). Predicting Societal Corruption Across Time: Values, Wealth, or Institutions? *Journal of Cross-Cultural Psychology*, 1594–1605.

OECD. (2008). *Corruption* (pp. 1–98). OECD.

Olken, B. A. (2009). Journal of Public Economics. *Journal of Public Economics*, *93*(7-8), 950–964. http://doi.org/10.1016/j.jpubeco.2009.03.001

Ostrom, E. (2000). Collective Action and the Evolution of Social Norms. *The Journal of Economic Perspectives*, *14*, 137–158.

Paldam, M. (2002). The cross-country pattern of corruption: economics, culture and the seesaw dynamics. *European Journal of Political Economy*, *18*, 215–240.

Pellegata, A. (2012). Constraining political corruption: an empirical analysis of the impact of democracy. *Democratization*, *20*(7), 1195–1218. http://doi.org/10.1080/13510347.2012.688031

Popper, K. R. (1966). Open Society and its Enemies (5 ed.). London: Routledge & Kegan Paul.

Putnam, R. (1993). Making Democracy Work: Civic Traditions in Modern Italy. Princeton: Princeton University Press.

Rohwer, A. (2009). *Measuring Corruption: A Comparison Between The Transparency International's Corruption Perceptions Index And The World Bank's Worldwide Governance Indicators* (pp. 1–11). Center for Economic Studies Munich.

Rose, R. (2001). A Diverging Europe. *Journal of Democracy*, *12*(1), 93–106. http://doi.org/10.1353/jod.2001.0014

Rose, R., & Peiffer, C. (2012). *Paying Bribes to Get Public Services: A Global Guide to*

Concepts and Survey Measures (No. 494) (pp. 1–64). Glasgow: Centre for the Study of Public Policy.

Rose, R., Mishler, W., & Haerpfer, C. (1998). Democracy and its alternatives: Understanding post-communist societies. Baltimore, Maryland: The John Hopkins University Press.

Rose-Ackerman, S. (1978). Corruption: A study in Political Economy. New York: Academic Press.

Rose-Ackerman, S. (1999). Corruption and government : causes, consequences, and reform. Cambridge: Cambridge University Press.

Rose-Ackerman, S., & Soreide, T. (2006). International handbook on the economics of corruption. Cheltenham: Edward Elgar Publishing.

Rothstein, B. (2005). Social traps and the problem of trust. Cambridge: Cambridge University Press.

Rothstein, B. (2007). *Anti-Corruption – A Big Bang Theory* (Vol. 3, pp. 1–27). The Quality of Government Institute.

Rothstein, B. (2011). Anti-corruption: The Indirect "Big Bang" approach. *Review of International Political Economy*, *18*(2), 228–250. http://doi.org/10.1080/09692291003607834

Rothstein, B., & Eek, D. (2009). Political Corruption and Social Trust: An Experimental Approach. *Rationality and Society*, *21*(1), 81–112. http://doi.org/10.1177/1043463108099349

Rothstein, B., & Torsello, D. (2013). *Is Corruption Understood Differently in Different Cultures?* (No. 5) (pp. 1–27). The Quality of Government Institute.

Sandholtz, W., & Taagepera, R. (2005). Corruption, Culture, and Communism. *International Review of Sociology*, *15*(1), 109–131. http://doi.org/10.1080/03906700500038678

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, *25*, 1–65.

Schwartz, S. H. (2007). *A proposal for measuring value orientations across nations* (pp. 1–61). European Social Survey.

Scott, J. C. (1972). Comparative political corruption. Englewood Cliffs, N.J: Prentice-Hall.

Shleifer, A. (1997). Government in transition. *European Economic Review*, 355–410.

Smith, B. C. (2007). *Good governance and development*. Basingtoke: Palgrave Macmillan.

Svensson, J. (2005). Eight Questions about Corruption. *The Journal of Economic Perspectives*, *19*(3), 19–42.

Tanzi, V. (1998). *Corruption Around the World* (Vol. 45, pp. 1–36). International Monetary Fund.

Teorell, J. (2007). *Corruption as an Institution: Rethinking the Nature and Origins of the Grabbing Hand* (No. 2007:5) (pp. 1–26). The Quality of Government Institute.

Thompson, T., & Shah, A. (2005). *Transparency International's Corruption Perceptions Index: Whose Perceptions Are They Anyway?* (pp. 1–53).

Transparency International. (2012a). *Corruption Perceptions Index 2012: An Updated Methodology* (pp. 1–2). TI. Retrieved from http://www.transparency.org/files/content/pressrelease/2012_CPIUpdatedMethodology_EMBARGO_EN.pdf

Transparency International. (2012b). *Corruption Perceptions Index 2012: Technical Methodology Note* (pp. 1–3). Transparency International.

Transparency International. (2014). *Corruption Perception Index 2014: Full Source Description* (pp. 1–13). Transparency International.

Transparency International (Ed.). (n.d.). FAQs on Corruption. Retrieved December 2015, from http://www.transparency.org/whoweare/organisation/faqs_on_corruption

Treisman, D. (2000). The Causes of Corruption: A Cross-National Study. *Journal of Public Economics*, *76*, 399–457.

Treisman, D. (2007). What Have We Learned About the Causes of Corruption from Ten Years of Cross-National Empirical Research? *Annual Review of Political Science*, *10*(1), 211–244. http://doi.org/10.1146/annurev.polisci.10.081205.095418

Treisman, D. (2013). Corruption in the Post-communist Transition. In P. Hare & G. Turley (Eds.), *Handbook of the Economics and Political Economy of Transition* (pp. 209–216). London: Routledge.

United Nations. (2004). *UNITED NATIONS CONVENTION AGAINST CORRUPTION* (pp. 1–65). United Nations.

United Nations (Ed.). (n.d.). Composition of macro geographical (continental) regions, geographical sub-regions, and selected economic and other groupings. Retrieved November 2016, from http://millenniumindicators.un.org/unsd/methods/m49/m49regin.htm#europe

Uslaner, E. M. (2002). The Moral Foundations of Trust. Cambridge: Cambridge University Press.

Uslaner, E. M. (2005). Inequality, Trust, and Civic Engagement. *American Politics Research*, *33*(6), 868–894. http://doi.org/10.1177/1532673X04271903

Uslaner, E. M. (2008). Corruption, Inequality, and the Rule of Law. Cambridge: Cambridge University Press.

Uslaner, E. M. (2009). Corruption. In G. T. Svendsen & G. L. H. Svendsen (Eds.), *The Handbook of Social Capital: The Troika of Sociology, Political Science and Economics* (pp. 127–142). Northampton: Edward Elgar Publishing.

Varese, F. (1994). Is Sicily thefuture ofRussia? Private protection. *Archives Europeenes De Sociology*, *35*, 224–258.

Weber, M. (1920). Economy and Society: An Outline of Interpretive Sociology. Berkeley: University of California Press.

Wei, S. J., & Wu, Y. (2001). *Negative Alchemy? Corruption, Composition of Capital Flows, and Currency Crises*. NBER Working Paper Series 8187.

Welzel, C., Inglehart, R. F., & Klingemann, H.-D. (2003). The theory of human development: A crosscultural analysis. *European Journal of Political Research*, 341–379.

World Bank. (1997a). *Helping Countries Combat Corruption* (pp. 1–73). The World Bank.

World Bank. (1997b). World Development Report: The State in a Changing World. New York: Oxford University Press.

World Bank. (n.d.). *Control of Corruption* (pp. 1–2). The World Bank.

Wraith, R. E., & Simpkins, E. (1963). *Corruption in developing countries: including Britain until the 1880's*. London: George Allen and Unwin.

You, J.-S., & Khagram, S. (2005). A Comparative Study of Inequality and Corruption. *American Sociological Review*, *70*(1), 136–157.

Zakaria, P. (2013). Is corruption an enemy of civil society? The case of Central and Eastern Europe. *International Political Science Review*, *34*(4), 351–371. http://doi.org/10.1177/0192512112466880

Zimbardo, P. (2007). The Lucifer Effect: Understanding How Good People Turn Evil. New York: Random House Trade Paperbacks.

7. DATA SOURCES

ARDA ed. (2014), World Religion Dataset: National Religion Dataset, Available at: http://www.thearda.com/Archive/Files/Descriptions/WRDNATL.asp

ESS Round 2: European Social Survey Round 2 Data (2004). Data file edition 3.4. Norwegian Social Science Data Services, Norway – Data Archive and distributor of ESS data for ESS ERIC.

ESS Round 5: European Social Survey Round 5 Data (2010). Data file edition 3.2. Norwegian Social Science Data Services, Norway – Data Archive and distributor of ESS data for ESS ERIC.

European Commission (2012): Eurobarometer 64.3 (Nov-Dec 2005). TNS OPINION & SOCIAL, Brussels [Producer]. GESIS Data Archive, Cologne. ZA4415 Data file Version 1.0.1, doi:10.4232/1.10971

European Commission (2012): Eurobarometer 68.2 (Nov-Dec 2007). TNS OPINION & SOCIAL, Brussels [Producer]. GESIS Data Archive, Cologne. ZA4742 Data file Version 4.0.1, doi:10.4232/1.10986

European Commission (2012): Eurobarometer 72.2 (Sep-Oct 2009). TNS OPINION & SOCIAL, Brussels [Producer]. GESIS Data Archive, Cologne. ZA4976 Data file Version 3.0.0, doi:10.4232/1.11137

European Commission and European Parliament, Brussels (2014): Eurobarometer 76.1 (2011). TNS OPINION & SOCIAL, Brussels [Producer]. GESIS Data Archive, Cologne. ZA5565 Data file Version 4.0.0, doi:10.4232/1.11847

European Commission, Brussels (2015): Eurobarometer 79.1 (2013). TNS Opinion, Brussels [producer]. GESIS Data Archive, Cologne. ZA5687 Data file Version 2.0.0, doi:10.4232/1.12417

European Research Centre for Anti-Corruption and State-Building. (2016). IPI (Index of Public Integrity). Retrieved from: http://integrity-index.org/

Eurostat (1990-2014). Gini coefficient of equivalised disposable income - EU-SILC survey. http://ec.europa.eu/eurostat/tgm/table.do?tab=table&language=en&pcode=tessi190

ISSP Research Group (2008): International Social Survey Programme: Role of Government IV - ISSP 2006. GESIS Data Archive, Cologne. ZA4700 Data file Version 1.0.0, doi:10.4232/1.4700

Transparency International (2004-2011). Global corruption Barometer. Retrieved from: http://archive.transparency.org/policy_research/surveys_indices/gcb

Transparency International (1995-2014). Corruption perception index. Retrieved from: http://www.transparency.org/research/cpi/

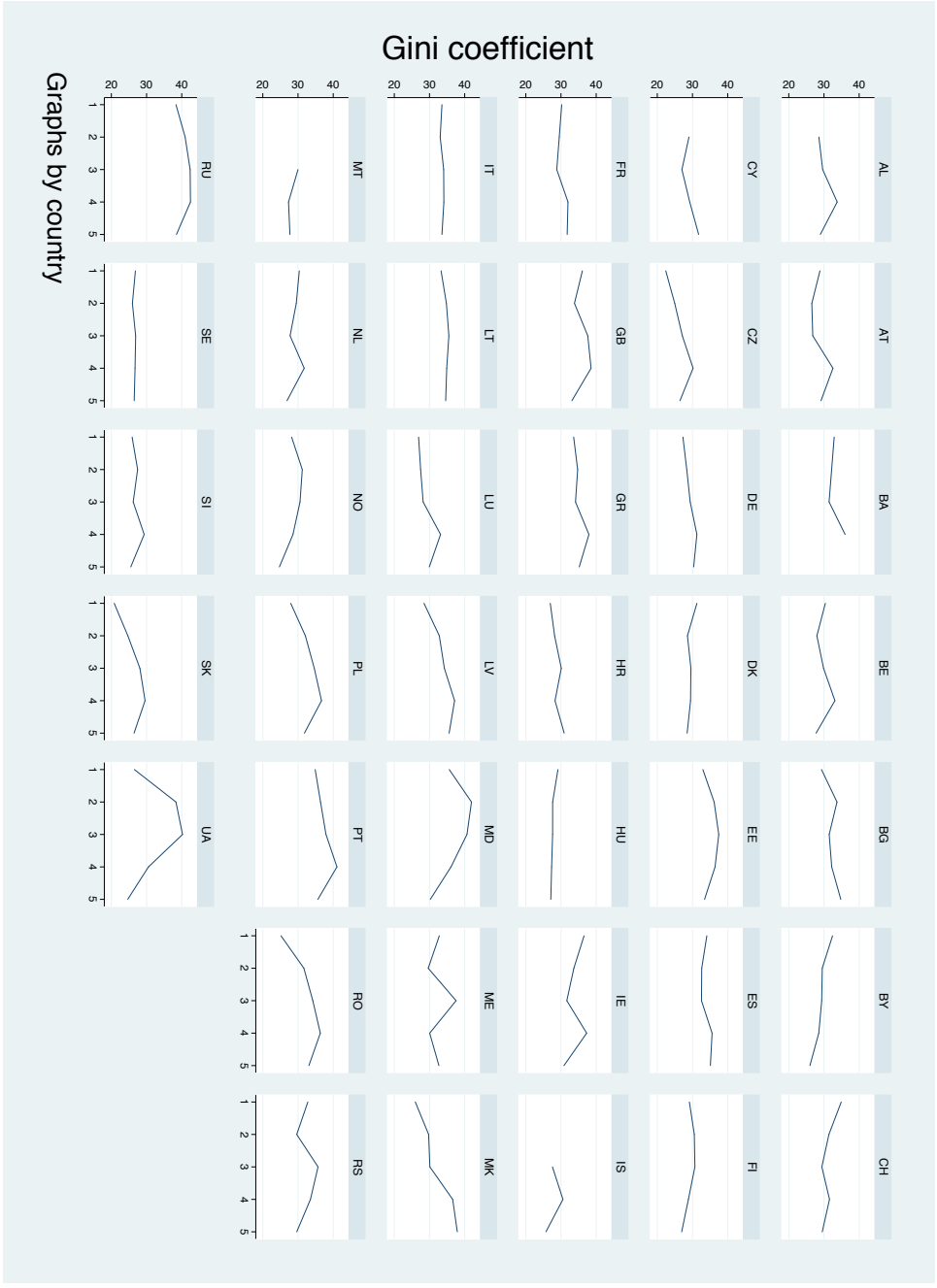
WORLD VALUES SURVEY Wave 3 1995-1998 OFFICIAL AGGREGATE v.20140921. World Values Survey Association (www.worldvaluessurvey.org). Aggregate File Producer: Asep/JDS, Madrid SPAIN.

World Bank. (1996-2014). Control of Corruption. Worldwide Governance Indicators (www.govindicators.org)

World Bank. (1999-2014) EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS). Panel Database. 1999, 2002-2009, 2009-2014.

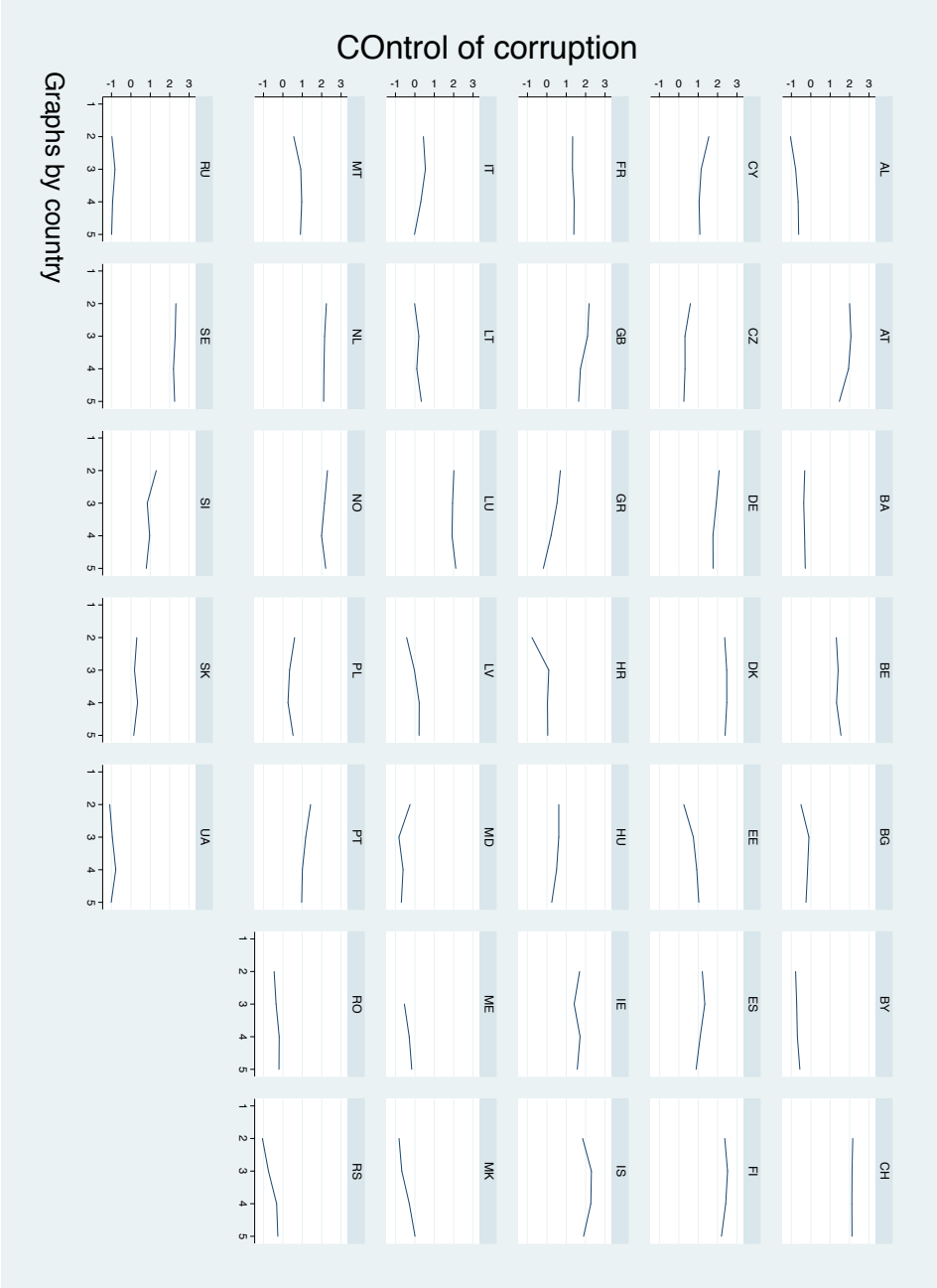
8. ANNEX

Figure 32: Development of Gini coefficient in Europe



Source: WB

Figure 33: Development of Control of Corruption in Europe



Source: WB

Codebook:

Corruption

WVS 1996, perception

How widespread do you think bribe taking and corruption is in this country?

Categories: 1 (almost no public official is engaged in it) - 4(almost all public official are engaged in it)

ESS 2004, experience

How often, if ever, have each of these things happened to you in the last five years? A public official asked you for a favour or a bribe in return for a service.

Categories: 1 (Never); 2(Once); 3 (Twice); 4 (3 or 4 times); 5(5 times or more)

ESS 2004, experience

How often, if ever, have you done each of these things in the last five years? Use this card for your answers. How often, if ever, have you? ...offered a favour or bribe to a public official in return for their services?

Categories: 1 (Never); 2(Once); 3 (Twice); 4 (3 or 4 times); 5(5 times or more)

ESS 2010, perception

How often do police [judges] in country take bribes?

(0=never, 10=always)

Eurobarometer 2005, 2007, 2009, 2011, experience

Over the last 12 months, has anyone in [your country] asked you, or expected you, to pay a bribe for his or her service?

Recoded into categories: 0 (No, nobody did); 1(Yes, somebody did)

Original categories below:

QC6	Over the last 12 months, has anyone in (OUR COUNTRY) asked you, or expected you, to pay a bribe for his or her services?

(SHOW CARD – READ OUT – ROTATE ITEMS 2 TO 14 – MULTIPLE ANSWERS POSSIBLE)

	(747-761)
No, nobody did	1,
Yes, from people working in the police service	2,
Yes, from people working in the customs service	3,
Yes, from people working in the judicial services	4,
Yes, from politicians at national level	5,
Yes, from politicians at regional level	6,
Yes, from politicians at local level	7,
Yes, an official awarding public tenders	8,
Yes, an official issuing building permits	9,
Yes, an official issuing business permits	10,
Yes, a people working in the public health sector	11,
Yes, a people working in the public education sector	12,
Yes, an inspector (health, construction, food quality, sanitary control and licensing)	13,
Yes, from someone else	14,
DK	15,

Eurobarometer 2005, 2007, 2009, 2011, perception

In (your country), do you think that the giving and taking of bribes, and the abuse of positions of power for personal gain, are widespread among following?

Recoded into categories: 0 (No); 1(Yes)

Original categories below:

QC5	In (OUR COUNTRY), do you think that the giving and taking of bribes, and the abuse of positions of power for personal gain, are widespread among any of the following?

(SHOW CARD – READ OUT – ROTATE – MULTIPLE ANSWERS POSSIBLE)

	(732-746)
The people working in the police service	1,
The people working in the customs service	2,
The people working in the judicial services	3,
Politicians at national level	4,
Politicians at regional level	5,
Politicians at local level	6,
Officials awarding public tenders	7,
Officials issuing buildings permits	8,
Officials issuing business permits	9,
People working in the public health sector	10,
People working in the public education sector	11,
Inspectors (health, construction, food quality, sanitary control and licensing)	12,
None (SPONTANEOUS)	13,
Other (SPONTANEOUS)	14,
DK	15,

Eurobarometer 2013, experience

Over the last 12 months, has anyone in [your country] asked you, or expected you, to pay a bribe for his or her service?

Recoded into categories: 0 (No, nobody did); 1(Yes, somebody did)

Original categories below:

QB9a	Over the last 12 months, have you had any contact with any of the following in (OUR COUNTRY)?

QB9b	Thinking about these contacts in the past 12 months has anyone in (OUR COUNTRY) asked you or expected you to pay a bribe for his or her services?

(SHOW CARD – MULTIPLE ANSWERS POSSIBLE BY COLUMN)

(READ OUT – ROTATE)	QB9a HAS HAD CONTACT	QB9b ASKED OR EXPECTED YOU TO PAY A BRIBE
Police, customs	1,	1,
Tax authorities	2,	2,
The Courts (tribunals)	3,	3,
Social security and welfare authorities	4,	4,
Public prosecution service (INT.: By this we mean a government or public official who prosecutes criminal actions on behalf of the state or community)	5,	5,
Politicians at national, regional or local level	6,	6,
Political parties	7,	7,
Officials awarding public tenders	8,	8,
Officials issuing building permits	9,	9,
Officials issuing business permits	10,	10,
The healthcare system	11,	11,
The education sector	12,	12,
Inspectors (health and safety, construction, labour, food quality, sanitary control and licensing)	13,	13,
Private companies	14,	14,
Banks and financial institutions	15,	15,
None (SPONTANEOUS)	16,	16,
Refusal (SPONTANEOUS)	17,	17,
DK	18,	18,

Eurobarometer 2013, perception

In (your country), do you think that the giving and taking of bribes, and the abuse of positions of power for personal gain, are widespread among following?

Recoded into categories: 0 (No); 1(Yes)

Original categories below:

QB7	In (OUR COUNTRY), do you think that the giving and taking of bribes and the abuse of power for personal gain are widespread among any of the following?	
	(SHOW CARD – READ OUT – ROTATE – MULTIPLE ANSWERS POSSIBLE)	
	Police, customs	1,
	Tax authorities	2,
	The Courts (tribunals)	3,
	Social security and welfare authorities	4,
	Public prosecution service (INT.: By this we mean a government or public official who prosecutes criminal actions on behalf of the state or community)	5,
	Politicians at national, regional or local level	6,
	Political parties	7,
	Officials awarding public tenders	8,
	Officials issuing building permits	9,
	Officials issuing business permits	10,
	The healthcare system	11,
	The education sector	12,
	Inspectors (health and safety, construction, labour, food quality, sanitary control and licensing)	13,
	Private companies	14,
	Banks and financial institutions	15,
	None (SPONTANEOUS)	16,
	DK	17,

ISSP 2006, experience

In the last five years, how often have you or a member of your immediate family come across a public official who hinted they wanted, or asked for, a bribe or favour in return for a service?

Categories: 0 (never), 1 (Seldom), 2 (Occasionally), 3(Quite often), 4 (Very often)

ISSP 2006, perception

In your opinion, about how many politicians (public officials) are involved in corruption? 0 (almost none), 1 (A few), 2 (Some), 3(Quite a lot), 4 (Almost all)

GCB 2004, 2005, perception

To what extent do you perceive the following sectors in this country to be affected by corruption?

Categories: 1 (not at all corrupt) - 5 (extremely corrupt)

Battery with these options: Customs, Education system, Legal system/Judiciary, Medical services, Police, Political parties, Parliament/legislature, Registry and permit services, Utilities, Tax revenue, Business/Private sector, Media, Military, NGOs, and Religious bodies.

GCB 2004, 2005, experience

In the past 12 months, have you or anyone living in your household paid a bribe in any form? Categories: 1(Yes); 2(No)

GCB 2006, perception

To what extent do you perceive the following sectors in this country to be affected by corruption?

Categories: 1 (not at all corrupt) - 5 (extremely corrupt)

Battery with these options: Education system, Legal system/Judiciary, Medical services, Police, Political parties, Parliament/legislature, Registry and permit services, Utilities, Tax revenue, Business/Private sector, Media, the Military, NGOs, and Religious bodies.

GCB 2006, experience

A) In the past 12 months, have you or anyone living in your household had a contact with the following institution/organisation?

Categories: 1(Yes); 2(No)

Battery with these options: Education system, Legal system/Judiciary, Medical services, Police, Registry and permit services, Utilities, Tax revenue.

B) In the past 12 months, have you or anyone living in your household paid a bribe in any form? Categories: 1(Yes); 2(No)

Battery with these options: Education system, Legal system/Judiciary, Medical services, Police, Registry and permit services, Utilities, Tax revenue.

GCB 2007, perception

To what extent do you perceive the following sectors in this country to be affected by corruption?

Categories: 1 (not at all corrupt) - 5 (extremely corrupt)

Battery with these options: Education system, Legal system/Judiciary, Medical services, Police, Political parties, Parliament/legislature, Registry and permit services, Utilities, Tax revenue, Business/Private sector, Media, the Military, NGOs, and Religious bodies.

GCB 2007, experience

A) In the past 12 months, have you or anyone living in your household had a contact with the following institution/organisation?

Categories: 1(Yes); 2(No)

Battery with these options: Education system, Legal system, Judiciary, Medical Services, Police, Registry and permit services, Telephone, Electricity provider, Water Service Provider, Gas Provider, Tax revenue.

B) In the past 12 months, have you or anyone living in your household paid a bribe in any form? Categories: 1(Yes); 2(No)

Battery with these options: Education system, Legal system, Judiciary, Medical Services, Police, Registry and permit services, Telephone, Electricity provider, Water Service Provider, Gas Provider, Tax revenue.

GCB 2009, perception

Which of these six sectors/organizations would you consider to be most affected by corruption?

Categories: 1 (not at all corrupt) - 5 (extremely corrupt)

Battery with these options: Political parties, Parliament/legislature, Business/Private sector, Media, Public Officials/Civil Servants, Judiciary.

GCB 2009, experience

A) In the past 12 months, have you or anyone living in your household had a contact with the following institution/organisation?

Categories: 1(Yes); 2(No)

Battery with these options: Education Services, Judiciary, Medical Services, Police, Registry and permit services, Utilities, Tax revenue, Land services.

B) In the past 12 months, have you or anyone living in your household paid a bribe in any form? Categories: 1(Yes); 2(No)

Battery with these options: Education Services, Judiciary, Medical Services, Police, Registry and permit services, Utilities, Tax revenue, Land services.

GCB 2011, perception

To what extent do you perceive the following categories in this country to be affected by corruption?

Categories: 1 (not at all corrupt) - 5 (extremely corrupt)

Battery with these options: Political parties, Parliament/legislature, Police, Business/Private sector, Media, Public Officials/Civil Servants, Judiciary, NGOs, Religious bodies, Military, Education system.

GCB 2011, experience

A) In the past 12 months, have you or anyone living in your household had a contact with the following institution/organisation?

Categories: 1(Yes); 2(No)

Battery with these options: Education Services, Judiciary, Medical Services, Police, Registry and permit services, Utilities, Tax revenue, Land services, Customs.

B) In the past 12 months, have you or anyone living in your household paid a bribe in any form?
Categories: 1(Yes); 2(No)

Battery with these options: Education Services, Judiciary, Medical Services, Police, Registry and permit services, Utilities, Tax revenue, Land services, Customs.

GCB 2013, perception

To what extent do you see the following categories to be affected by corruption in this country?

Categories: 1 (not at all corrupt) - 5 (extremely corrupt)

Battery with these options: Political parties, Parliament/legislature, Police, Business/Private sector, Media, Public Officials/Civil Servants, Judiciary, NGOs, Religious bodies, Military, Education system, Medical and health services.

GCB 2013, experience

A) In the past 12 months, have you or anyone living in your household had a contact with the following institution/organisation?

Categories: 1(Yes); 2(No)

Battery with these options: Education system, Judicial system, Medical and health services, Police, Registry and permit services, Utilities, Tax, Land services.

B) In the past 12 months, have you or anyone living in your household paid a bribe in any form?
Categories: 1(Yes); 2(No)

Battery with these options: Education system, Judicial system, Medical and health services, Police, Registry and permit services, Utilities, Tax, Land services.